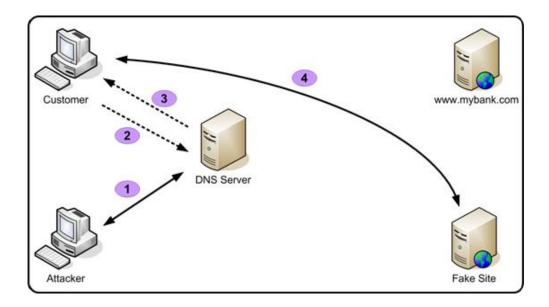
Security



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Pharming



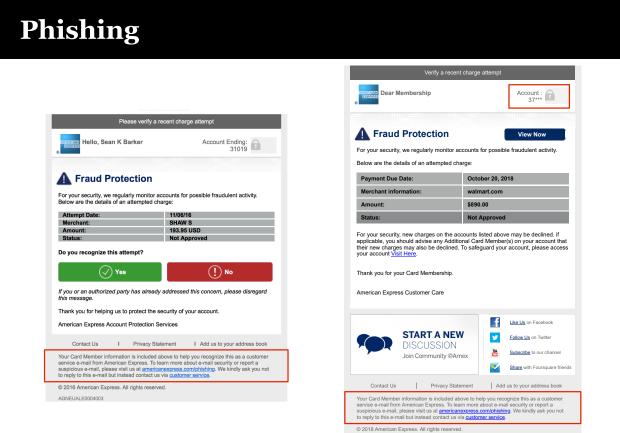
Sean Barker

Phishing

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Welcome	Send Money	Request Money	Merchant Tools	Auction Tools	
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Registered u	sers log in here. I	Be sure to <u>protect y</u>	our password.		
E	mail Address:		Forget your email add	lress?	
	Password:		Forget your password	<u>?</u>	
New users <u>s</u>	<mark>iqn up here</mark> ! It c	only takes a minute.			
				Log In	
Done					-

Bowdoin

Sean Barker

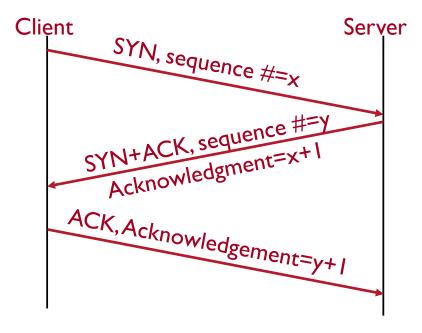


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Phishing

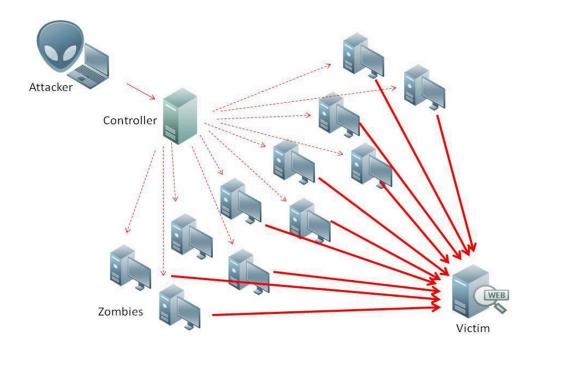
	Verify a recent	charge attempt
	Dear Membership	Account : 37***
	A Fraud Protection	View Now
	For your security, we regularly monitor act	counts for possible fraudulent activity.
From: American Express Online 10659	Below are the details of an attempted cha	rge:
Tom. American Express online 10005	Payment Due Date:	October 20, 2018
	Merchant information:	walmart.com
	Amount:	\$890.00
Subject: RE: Fraud Detection: Please view	Status:	Not Approved
your recent activity and we'll help you take corrective action. ID0225840 Date: October 20, 2018 at 4:50:35 PM EDT	For your security, new charges on the acc applicable, you should advise any Additio their new charges may also be declined. T your account <u>Visit Here</u> . Thank you for your Card Membership.	nal Card Member(s) on your account that
	American Express Customer Care	
To: undisclosed-recipients:;		
	START A NEW DISCUSSION Join Community @Am	
	Contact Us Privacy Stater	nent Add us to your address book
	Your Card Member information is included abc service e-mail from American Express. To lear suspicious e-mail, please wisit us at <u>americane</u> to reply to this e-mail but instead contact us via	n more about e-mail security or report a xpress.com/phishing. We kindly ask you not
	© 2018 American Express. All rights reserved.	
	AGNEUBBK0002003	
Bowdoin Sean Ba	 rker	

TCP Three-Way Handshake



Sean Barker

Distributed Denial of Service (DDoS)



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Bowdoin
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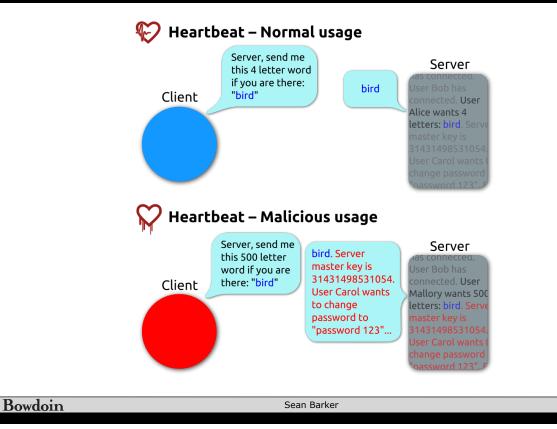
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Botnet Resource Consumption

Attack	Resource Threshold	Requests/Bot	Bots needed to exhaust
Static HTTP GET	60,000/sec	93 requests/sec at 250 bytes/request	645
Dynamic HTTP GET	3,000/sec	93 requests/sec at 250 bytes/request	40
SSL Handshake	600/sec	10 requests/sec	60

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Heartbleed (2014)

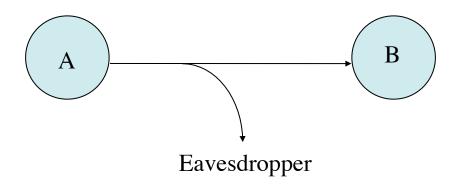


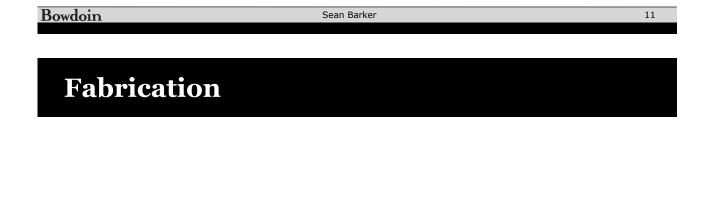
Secure Communication

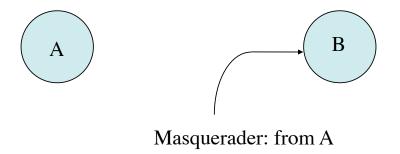


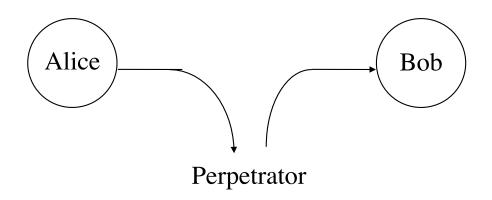
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Eavesdropping



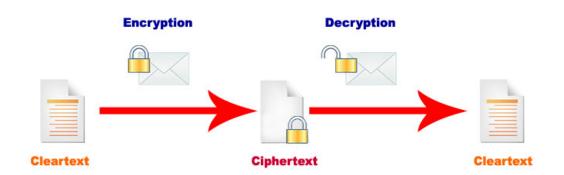




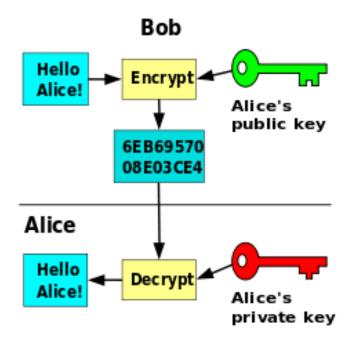


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Encryption



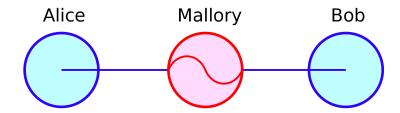
Public Key Cryptography



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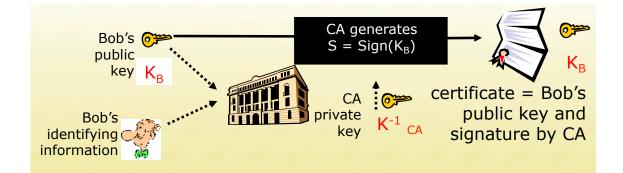
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Man in the Middle (MITM)



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Certification Authorities



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Certificates

