

Dealing with Cheating
5 Years of Evolving Approaches

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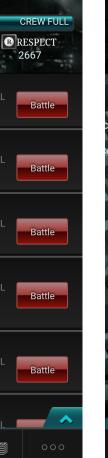




150 / 150 (+6) **≈**LEVEL \$ CASH UPGRADE

GAME DEVELOPERS CONFERENCE March 14–18, 2016 · Expo: March 16–18, 2016 #GDC16





More





What we'll be talking about

- Working together (Community and Developers)
- Community Feedback Meetings
- Sharing feedback with the entire team

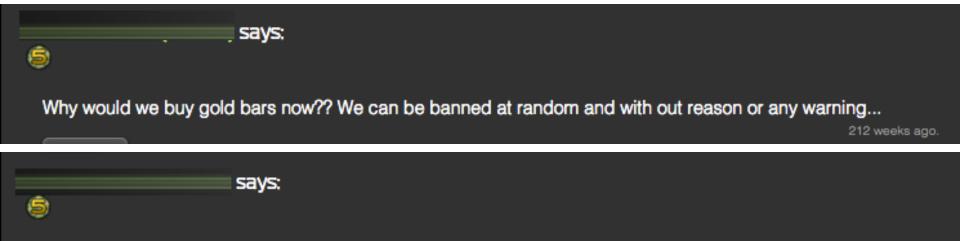
Room 3022 for discussion



Defining cheat parameters

Why is it important?

EVERYONE PLEASE GIVE THIS GAME A ONE STAR RATING



212 weeks ago.



Player Actions

- Auto-Clicking
- Account Sharing
- Exploitation of "Features"
- Sophisticated Browser Scripts

Consequences

- Character Reset
- Banning



Attempt - Autoclicker Detector

- Count Actions (Clicks)
- Simple Captcha (Are you human?)
- Simple Math (2+2=5?)



- It Sucked
- Only handled "Autoclickers"
- Clunky
- Community hated it
- Never really worked



Lesson

Cheaters will find a way around your roadblocks. What matters is the community's perception.



Attempt - Screw It, Look at the Logs

- Comb through activity logs
- Community reports potential cheaters

Date	Session Key	Event	Health	Stamina	Energy	Level	Uken Points	Money	Vault	User Agent	Host	
01/03/16 02:30:24	1ee5bdb4bQ	home#indexQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:30:34	1ee5bdb4bQ	home#reload_partialQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:30:34	1ee5bdb4bQ	chat#tab_wallQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:30:34	1ee5bdb4bQ	chat#tab_convoQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:30:34	1ee5bdb4bQ	chat#tab_clanQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:31:24	1ee5bdb4bQ	profile#selfQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:32:06	1ee5bdb4bQ	chat#show_customQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:32:20	1ee5bdb4bQ	chat#tab_clan_mark_readQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:32:26	1ee5bdb4bQ	home#reload_partialQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:32:36	1ee5bdb4bQ	chat#tab_clan_mark_readQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:36:36	1ee5bdb4bQ	chat#sayQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:36:53	1ee5bdb4bQ	home#reload_partialQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:36:55	1ee5bdb4bQ	clan#myclanQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:37:19	1ee5bdb4bQ	clan#leaveQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:37:20	1ee5bdb4bQ	clan#myclanQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys
01/03/16 02:37:20	1ee5bdb4bQ	clan#clansQ	650 / 650	70 / 70	944 / 10	98Q	6	19223625	44681669177941	Mozilla/5.0 (Linux; AndrQ	208.54.70.238 Q	Raw USys



- It sucked
- Enemies/Rivals identified as cheaters
- Friends/Allies defended as innocent
- No one was happy
- Lacked transparency



Lesson

Maybe we should try to reform cheaters?

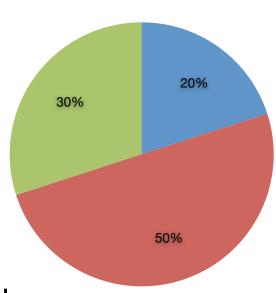


Attempt - Sanctioning

- Brand cheaters as cheaters
- Restrict access to certain game features
 - Gameplay they cheated with
 - Events/Tournaments
 - Leaderboards
- Remove any ill-gotten gains



- It really sucked
- It made little difference
- 20% of Sanctioned players kept cheating
- 50% of Sanctioned players quit
- 30% of Sanctioned players stopped cheating





- Punishment didn't feel significant to the community
- Sanctioned players protested publicly
- Community believed action was tied to revenue
- Saw an uptick in the number of players cheating



Lesson

We take cheating seriously - can we work with the community to fix this?



What now?

- Conferred with our moderators about removing the sanctioning status
- Which looks like...

- and the files without buildings, solid address washington If a copy to have 3-3 sets of standards. This night not be the case in DG, but is Foll there are many who are not spectroned who should be. Throughly December 10, 2014 at 0.41pm - Gha
- Treas chapting before sensitiving were berned or south The That always required in a size on the wrist. These players used autoclickers and bots and sanctioning was the size on the wrist stage. They have returned to the normal attendant, bein outright
- December 15, 2014 of Bollow-Silve 412 That's NO ACCURAGE
- commer 10, 30 YE at SHIPPING SAME
- initialities seen friends & free get barred, reset, & sanctioned, I, myself gont want to play with ARY cheesers. It be trilled to see them all gone. TOSindes, Idon't really agree with this but except it, as mode carriage what
- December 15, 3514 at 640pm GRe 21 please give on example for what you are stating. secretary 13, 2011 at 6 52mm - Like
- Lefs simply this Sanctions have been dropped. Findo, Future electroduct will result to treditional puredyments
 - Regarding sanctioning. Usen would like to remove this from the system. On the negative side, it seems brief toward cheaters. On the positive side. It's simpler. All are the same and subject to the same rules going toward. (Although past offenders won't be longstens.
- At the end of the day, purposeers have been served and it south the pool to have a 'clear state' where there is less doubt and confusion over discipline
- While we all find that those with sanctions removed should have been barned or received severe purishments; it lant right or fair to retrospectively change.
- their punishment because Uken move the gostocets. the should also appreciate, as James Interest, that Uken word to remove sanctions to simplify code and procedure. Part of the reason for this decusion is that we get to think and vert about the topic. That was, when User remote sandining we are less likely to read suddenly from surprise or upon. So it's an inegrature reverse parties raise this question to whom there arguebly is a predetermined prevent and I hope that we continue to be
- invalved in those important precent details. December 13, 2016 at 6 (Spin) Like Fire happy to be wrangers and you obviously have a case
- mind so share? You say Uken continue to give a size on the wrist both before and after sunctioning, if there are confirmed bots and disherusess that talth in them is misplaced it is better to know. Character 15, 2016 at 6 bloom, 1284 - 47.1
- cour years. If they want preprotected with a close state than they need to be reset and start with a clean new account. Chesters shouldn't get a fee pass. Unasitioning their with no restrictions sends the every message. December 15 2014 of 500cm - Use - 7-1
- The dean-state-example is from our and Ukan's point of view. not that of cheating players. The sanctioned players have been gurished by sanctions already. I'm all for lifting sanctions and leaving restrictions in place but I forth see that liken-could reasonably apply additional punitive restrictions
- December 13, 2014 at 9 05pm 1844 Then not being on the laster already had then marked as having changed, on I don't use a problem with an assembly or other moreous being used. I still trink they should appear on the laster, but with no rans. Not MARKET I Bridge.
- would now som a week buy, then time served and maybe reinstate their tourney privileges. If their activity would now your a resultiness burn then no formace
- Heligys, lets not toget have players were cought cleating, were warned
- but continued in most cases, so indon't feel sory for any of frem. They should feel dame buly they're even still allowed to play at all in no opinion December 15, 2015 of Sittlers 1084 47.4
- Chesters used their exploits to advance themselves over other piecers. Why its they get the periodice agreeability on Lagend page? Then should be a lingering stigma attached in being a cheel MO. December 15, 2014 of Tillion Uke 212
- If these aboves are not marked extrafery than when they offend players are not as likely to report it. Liken should have these known cheaters on a watch-list where their amounts per extra accords. December 15, 2014 of 7-25on - Glas -7-2
- I don't sare about the Lagends pages, but they settainly need to access on the Ladder. Not appearing on the fadder is actually an untily December 15, 2014 of 7.51pm - She - 21.2
- The only tenefit of not appearing on ladder is 'meube' getting est atlacks. They do will turn up on belle fall though as aren't hollow December 15, 2014 of 1004pm: Like 🔥 2
- If tell you there are parcicipant blavers that its not above up on the ladder that continue to run bris / solpts. If they appeared on the ladder other players would notice their meteors; rise up the surks and regard them in myopinion User needs better monitoring in place to bust all these cheaters. Weakly more-enems give torses KP and payers who run bots scripts are making out Skirbandis. Any account that is not everaging 6 hours a day offereduring a visit is about only cheating and this reside to be addressed without expecting plauses to make a complaint before investigating December 17, 2014 at 9/10pm GNa - 2-4
- Thank you is even one who participated in the decimators from ead every single jost and have evaluated the test option for the immediate Solarie - and that is to "not" (If the Sanctioning purishment. believe that more bad will come out of this than good. Senctioned users
- breakhed Terms of Service and any narroyal of these punishments may be seen regelies's by the community. Just to touch on one of the concerns Laurence brought up - we do requisity re-investigate these users and have taken further action in any cases where they are still treating TOS. This will continue to be the plan asing toward.



What now?

- Attempt 1 Autoclicker Detection
- Attempt 2 Analytical Approach
- Attempt 3 Sanctioning

We have to have a guideline in place



Attempt - Back to Analytics

- Report identifying suspect players
- In addition to the activity logs, we also have cumulative stats on player behaviour

10 most suspicious repeated actions

User	Platform	Event	Count
	facebook	NAME OF TAXABLE PARTY.	18874
-	facebook	report, by called late.	12832
	facebook	report, by representing the foreign	4526
	facebook	report, by collection	4307
	web	month, by representing the facilities	3751
Ξ	facebook	report by saltraffects	3670
	facebook	most, to operation, for both oper	3594
	facebook		3298
	facebook		3097
	facebook	most to operate Avelority	3060

10 most suspicious users

User	Platform	# actions	AVG Actions/sec		
-	web	32496	143.78		
	facebook	30256	124		
	facebook	25125	129.51		
	facebook	18881	158.66		
	facebook	17646	69.74		
	web	17539	81.19		
	facebook	17122	89.64		
	facebook	15599	125.79		
	facebook	14695	198.58		
	iphone	14392	23.51		



- It didn't suck
- Able to take preventative action
- Show Community you're proactive
- Community and Mods see notices of action taken as a sign of things moving in a positive direction
- Community generally feels there's still more to do



Lesson

The real cost of cheaters is the loss of trust from the Community when they see the cheating happening.



It will be OK

- Games are still running
- Communities are still strong

 Remember: the real cost of cheating is from the Community noticing and losing trust



Don't sweat the small stuff

- Easy to get into a combative mindset with cheaters, avoid it!
- Never going to be able to prevent all cheating
- Focus on preventing the stuff the Community can see
- Don't need to get all cheaters, just prevent their negative impact on the game



Going Forward

- Think about cheating from the start
- Follow security best practices
 - Lock the client
 - Encrypt network traffic
 - Do proper authentication
 - Etc.
- Minimize exploitability
- Build in checks to flag suspicious behaviour



Thanks,

We'll be across from Room 3022 for any questions or discussion!

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