A Brief Introduction to Jammy Scoring

jammy

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1   Reasoning

You may ask, what is the main reasoning for Jammy Scoring? Our current CTF scoring systems are old and archaic, and all come with their flaws, which I'll briefly elaborate on shortly.

Our first scoring system is static scoring. This is the easiest to implement and understand, but comes with the flaw of scores relying solely on an author's intuition, which can be flawed in places. This is also the least strenuous method computationally.

Our second scoring system is dynamic scoring. I'm going to throw this under 2 buckets, the average skid understanding, and the chad Capture The Flag enthusiast understanding.

The skid understanding of dynamic scoring is that once a challenge is solved, points decrease for all teams who have not solved the challenge. This is something rarely seen implemented, however is often mistaken by newer players for the below method.

The chad Capture The Flag enthusiast understanding of dynamic scoring is that once a challenge is solved, points decrease for all teams involved. This may sound good, as it does difficulty balancing for the author, but is resource intensive, and gives a bad idea of general difficulty for the player.

However, Jammy Scoring alleviates all of these problems, as we're about to see.

2   Standard Jammy Scoring

In the standard implementation of Jammy Scoring, points start off at 1 for every single challenge. Points will increase by a steady rate until the event is 4 fifths complete, where they will max out at 1001. However, once the challenge is solved, points for that challenge lock, and are no longer able to be increased. The increase rate of points is calculated by multiplying event length by 0.8, and then dividing this by 1000. For example, an event with a length of 72 hours would stop increasing scores 60 hours in, and increase scores by 1 every 216 seconds.

3 Jammy Scoring Permutations

The above method sounds all well and good, however it is limited by the fact that there can be a massive consensus to flag hoard until 4 fifths into the CTF, which why some extra permutations can be added, to add an incentive for fast solves, a "blood bounty" of sorts.

The easiest to implement would be a doubling of points to the first blooder of a challenge, which can possibly entice people to solve challenges quickly, and put people off hoarding flags while waiting for the challenge points to increase, given their rivals may not want to wait.

Another incentive to possibly implement would be prizes for the teams who blood a challenge, which would encourage people not to flag hoard, but would be expensive for the organiser.

4 Evaluation

Jammy Scoring comes with its pros and cons. The main pro of Jammy Scoring is that does difficulty balancing, the pro of dynamic scoring, in a way that's easy for your average CTF player to understand, the pro of static scoring. However, a disadvantage is that teams may hold off to submit their flags until one point in the event, which may be a problem resource wise. This can be mitigated with one or both of the permutations of Jammy Scoring however.

5 Conclusion

In conclusion, perhaps we need to consider that our current Capture the Flag scoring systems can either be ambiguous, or straight up bad. Participants need a simple way to check difficulty of challenges on a linear scale, not by a vague label of "easy", "medium", or whatever you want, and to not be discouraged by dynamic scoring. Organisers need an easy way to what challenges are harder than others. Therefore, Jammy Scoring is the only reasonable option. If you don't know how to do it right, do it The Jammy Way.