

# 2024

- [30.10.2024 - Chests / Adjustments / Halloween](#)
- [25.09.2024 - Video guides / fixes](#)
- [11.09.2024 - Skill reset / Profiles](#)
- [06.09.2024 - Fixes](#)
- [04.09.2024 - Major Update](#)
- [The timeframe for the major update is planned.](#)
- [CTD Development: Major Update in Progress](#)
- [31.05.2024 - Target modes / Dragon](#)
- [29.05.2024 - Team-Damage / Fixes](#)
- [24.05.2024 - Power-Up Adjustments](#)
- [22.05.2024 - Skins](#)
- [15.05.2024 - Dragon / Diamonds / Fixes](#)
- [01.05.2024 - Turrets / Lights / Bomber and Nukes](#)
- [17.04.2024 - Optimizations / Fixes](#)
- [05.04.2024 - New Spawnsystem / Adjustments](#)
- [16.03.2024 - Trivial things](#)
- [15.03.2024 - Lightning / Support towers](#)
- [13.03.2024 - Missions / UI](#)
- [09.03.2024 - New map / Optimizations](#)
- [08.03.2024 - Maps / Fixes](#)
- [02.03.2024 - Fixes](#)
- [23.02.2024 - Additional effects / Fixes](#)
- [21.02.2024 - Skins/Effects/Fixes](#)
- [16.02.2024 - Skins / Changes](#)
- [14.02.2024 - Skins / Changes](#)
- [24.01.2024 - Chests / Shop](#)
- [17.01.2024 - Wiki / Changelog](#)



# 30.10.2024 - Chests / Adjustments / Halloween

## Chests

- Drop rates for boss-dropped chests have been adjusted to smooth out progression.
- This change was necessary to prevent level 5 chests from dropping on difficulty level 6.

### New drop rates by difficulty level:

Difficulty	Level 1	Level 2	Level 3	Level 4	Level 5
1	95%	5%	-	-	-
2	85%	15%	-	-	-
3	65%	30%	5%	-	-
4	35%	50%	15%	-	-
5	-	70%	30%	-	-
6	-	49.9%	50%	0.1%	-

## Adjustments

- Map voting has been expanded into a two-step process where viewers can now vote not only on the map but also on the difficulty level.
- The voting overview now also includes details on drop chances and scaling for each difficulty level.

## Halloween

- The Halloween map now has a new experimental mechanic:
  - After zombies are defeated, they have a 5% chance to drop a treat-filled pumpkin.
  - Pumpkins can be collected with the `!collect` command on Twitch, and each collected pumpkin grants a small bonus to a random team buff, including team lives.
  - These extra bonuses are not tracked in the web interface and are added as a multiplier in-game.



# 25.09.2024 - Video guides / fixes

## Video guides:

- **New Content:** Another video guide has been made available on YouTube. The topic of today's video is the **Item System**.
- **Linking:** A direct link to YouTube has now been added at the top of the inventory. A link to the corresponding video for the skill tree will follow soon.

## Fixes:

- Thanks to **MystoganCy**, an error in damage calculations within the game was identified and fixed.
- Item bonuses were sometimes not correctly factored into calculations. This issue has now been resolved.

# 11.09.2024 - Skill reset / Profiles

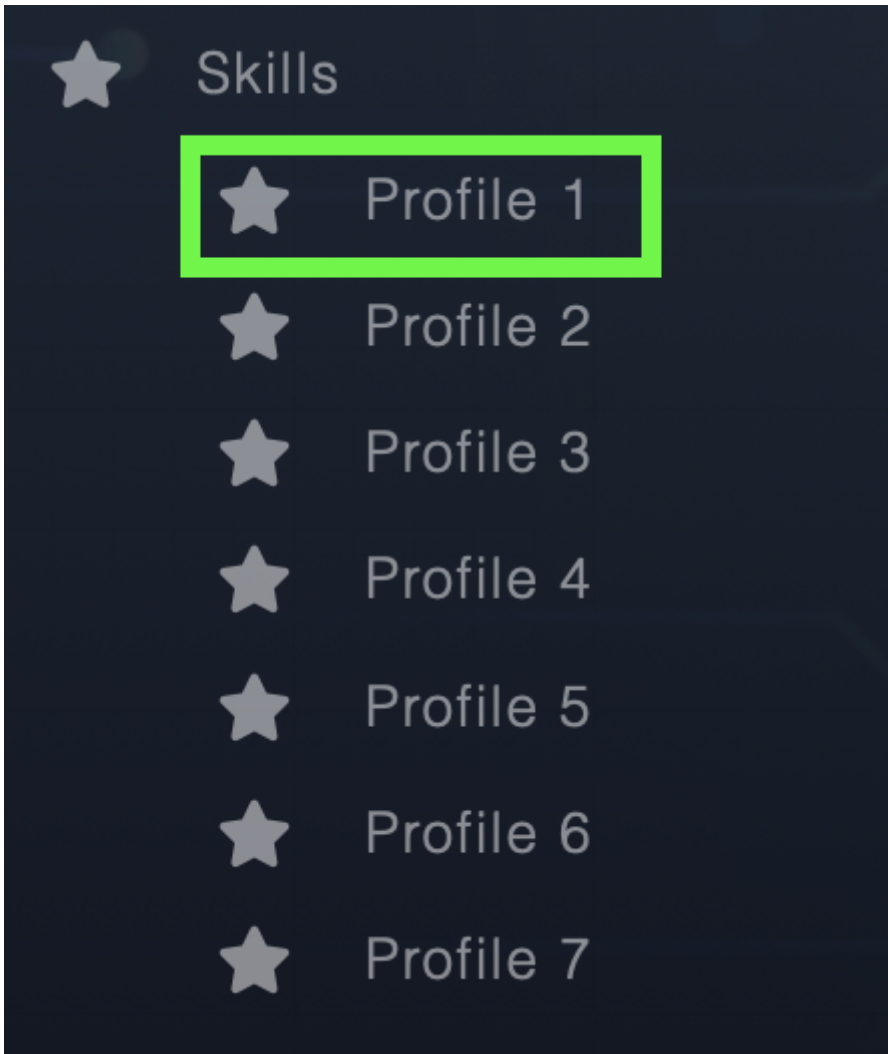
We've made an important change to the skills system, which required resetting all existing skill points.

**Previous Situation:** The skill tree used to apply to all turrets universally. This created certain limitations, as players were forced to specialize in one turret and were ultimately tied to that specific turret, limiting flexibility in gameplay.

**New Feature: Skill Profiles** To address this issue, we've introduced a new profile system. You can now create profiles that are assigned to individual turrets, providing much greater freedom and allowing players to adjust their playstyle without being locked into a single specialization.

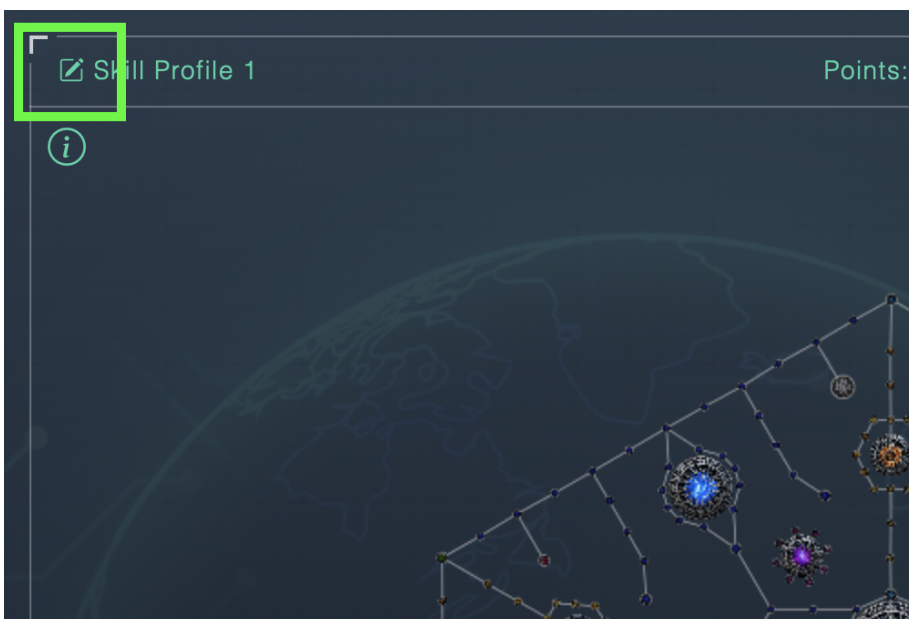
## How it works:

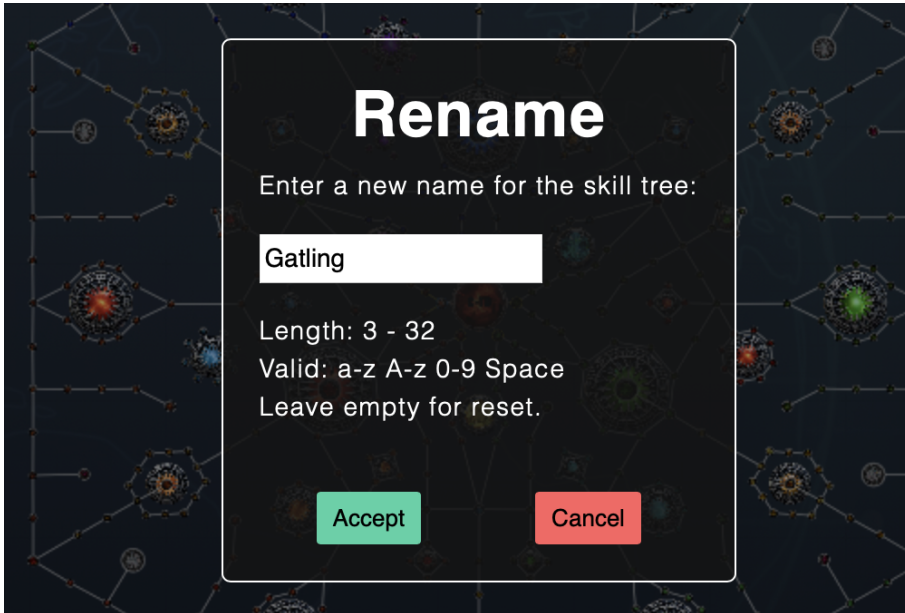
- 1. Open the menu:** Click on "Skills" on the left side of the menu.
- 2. Select a profile:** Choose "Profile 1"



**3. Distribute skill points:** Allocate your skill points as usual.

**4. Rename profile:** Click on the edit icon in the top-left corner to give your profile a name if needed.



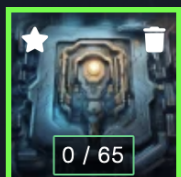


**5. Assign profile to turret:** Open your inventory, and for the desired turret, select the newly created profile. The profile name will be shown in the selection to avoid confusion.

## Gatling



Skill profile 1 (Gatling) ▼



This update is designed to make gameplay more dynamic and customizable. Enjoy exploring the new feature!

# 06.09.2024 - Fixes

The big update on Wednesday presented some unexpected challenges, as many elements couldn't be tested. Overall, the process went largely smoothly.

## Bug Fixes:

- **Status Effects on Bosses:**

There was an issue where status effects like Bleeding weren't applied properly to bosses. This happened because bosses are immune to crowd control (CC) effects, such as Stun and Slow. Due to a misclassification, Bleeding and similar effects were mistakenly treated as CC effects and therefore blocked.

## New Features:

- **Status Effect Chance Overhaul:**

Previously, having a status effect chance over 100% simply guaranteed the effect. Now, it works more like critical hit calculations:

- For example, if you have a 130% chance to apply Bleeding, it will guarantee one Bleed effect and give an additional 30% chance for a second one.
- For Stun and Slow, the duration increases instead, since stacking these effects wouldn't make sense (e.g., a double Stun wouldn't be useful). Additionally, a 100% Slow would essentially act as a Stun, which would be too strong, since Slows generally last much longer.

## Important Note:

- **Reset Cost (Skilltree):**

This week only, resetting will cost 10 Diamonds. Starting next week, the price will increase significantly. This lower cost is intended to give players the chance to thoroughly test the new system.

# 04.09.2024 - Major Update

Today's update brings the most extensive upgrade in the history of CTD. Here are the key changes:

## Skills

- **Completely New Skill System:** The old system has been replaced with a complex skill tree containing over 400 nodes. This forms the foundation for future expansions and offers numerous customization options.
- **Usage:** In the center, select one (or more) of the 6 yellow-bordered nodes and activate it with a click. Connected nodes will also turn yellow and can be activated accordingly. Remember to click "Accept" at the bottom to save your selection.
- **Reset:** The skill tree can be reset at any time for 10 diamonds, allowing you to redistribute your points.
- **Unique Skills:** Each turret now has an exclusive skill that only applies to that specific turret.
- **Damage Types:** Skills that modify turret damage types have not yet been implemented; more information on this is provided below.

## Items

- **Item System:** Missions now reward players with items that have different rarity levels, upgrades, and attributes. Items of rarity 1 to 3 can be obtained through missions.
- **Bonus Calculation:**
  - **Base Values without Percentages:** Values like damage are increased by a percentage. Example: 1000 damage + 10% = 1100 damage.
  - **Values with Percentages:** Values like critical chance are increased additively. Example: 5% crit chance + 10% = 15% crit chance.
- **CTD Quickstart Guide:** The guide has been updated and now explains the new item system in detail.

## Navigation

- **Updated Menu:** The navigation on C-TD.de has been improved and shortened for easier use.

## Shop

- **New Shopping Options:**

1. **Items:** New, random items are offered every hour, with each item being available only once. The usefulness varies, as the attributes are randomly combined. Prices can be high, especially for "Special Offers."
2. **Upgrades:** The inventory can be expanded by 9 slots for Gold-Coins. The price increases with each expansion.

## Leveling

- **Level System:** All accumulated levels have been carried over 1:1. The current level is now visible in the menu, and progress can be viewed with a click.
- **Map Voting:** The selection in stream voting has been expanded back to 3 maps.
- **Dragon Voting:** One of the three maps in the voting has a 50% chance of featuring a dragon that appears at the start of the first wave.

## Scaling

- **Enemy Scaling:** The first 10 waves now establish a base difficulty. Starting from wave 11, the game continues to scale based on the map's difficulty. Previously, scaling started only after wave 21.

## Resistances

- **New Mechanic:** From wave 11 onwards, resistances against different damage types will be displayed. These resistances increase as the game progresses, making it harder to advance since there are initially no ways to reduce them.

## Other Changes

- **Flamethrower:** The flamethrower now deals direct damage again and has its own missions.

## Note

This update took longer than expected due to unforeseen issues. One problem alone required over 30 hours to resolve.

## Next Update

The next update will focus on damage types and their customization. It will allow turrets to be decoupled from fixed damage types and status effects, enabling, for example, a Gatling turret to deal poison damage.

Current damage types:

- Gatling / Railgun: Physical
- Rocket Launcher: Explosive
- Chain Lightning / Nova: Lightning
- Flamethrower: Fire
- Support: None

# The timeframe for the major update is planned.

In recent months, we have been hard at work on a major update packed with new features, and now the release window has been set.

*\*Drumroll\** Starting from September 1st, we will put C-TD.de into maintenance mode and make all the necessary changes so that the update will be available for the following stream on September 4th. Since this update is very complex and affects all systems, the site may remain in maintenance mode for a few days.

But what exactly does this update include?

## 1. Skill-Tree

The concept of a skill tree is well-known from many role-playing games. For leveling up, you receive a skill point that can be used for improvements. Currently, there is a rudimentary system in place that allows players to use skill points gained from leveling up for minor upgrades, but this system was always intended as a simple placeholder.



The skill tree now consists of around 290 nodes, which can be activated and linked in any order, each for 1 skill point. The possible bonuses range from +1 team life to x% attack speed, all the way to new functions for turrets. For example, there is a skill for the Nova Tower that triggers a special attack with double range and double damage every 25 attacks. There will also be other modifications—for instance, the missile focus for the rocket launcher, which directs all rockets to the targeted enemy (dragon?) instead of randomly choosing targets.



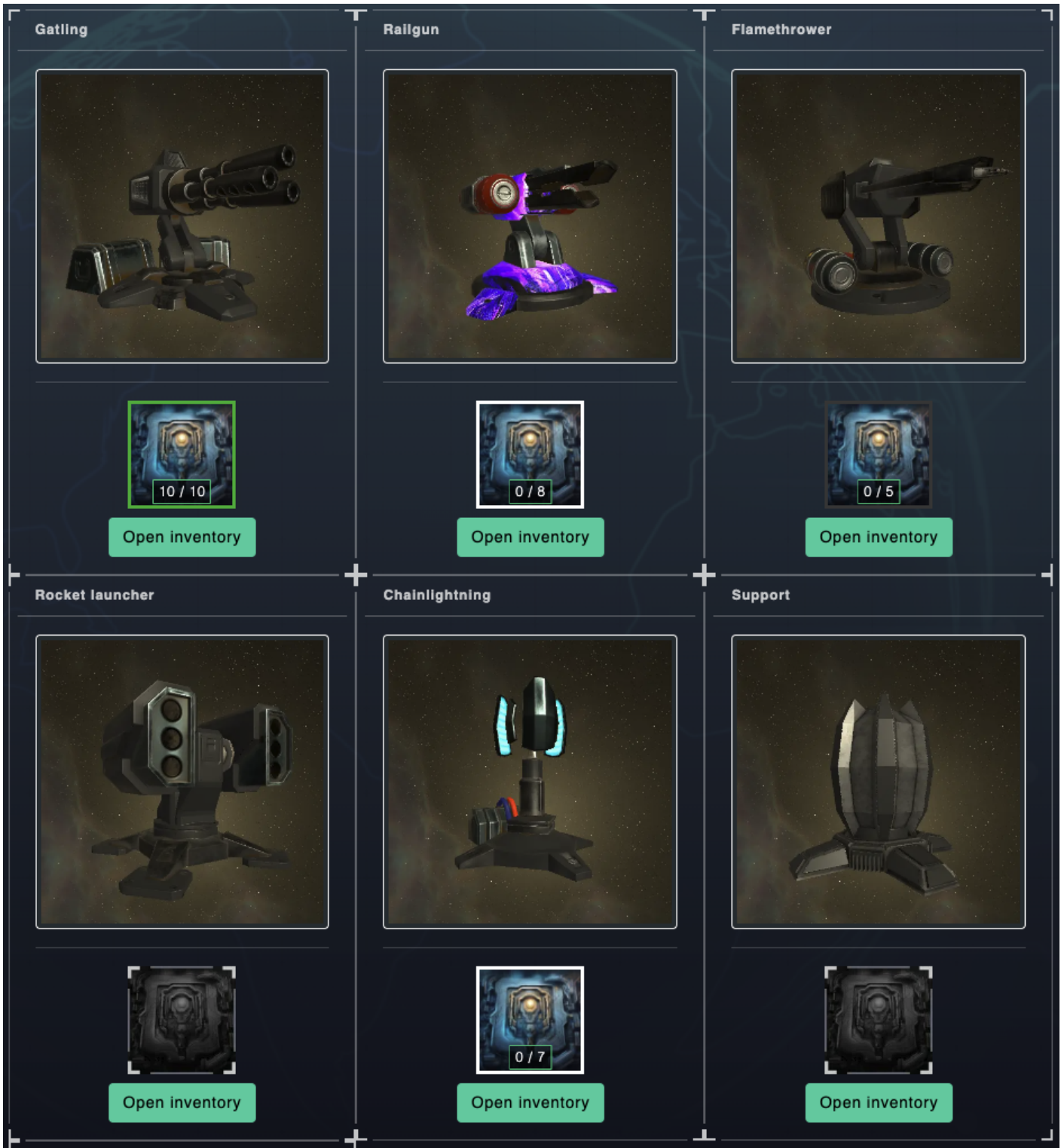
At launch, each turret will have one such skill available. The support turret is an exception, as it will receive two skills. However, one of these is already known and has been in the game for testing for a while: enemies that die nearby give double the amount of credits.

The skill tree will continue to expand in the future, with more skills of all kinds being added.

## 2. Items


What would a skill tree be without items?

Each turret will have an item slot where any item can be placed to enhance the turret.



Items can be purchased in a special shop but can also be acquired through gameplay. They will come in different quality levels, with random bonuses of varying strength, and can also be upgraded. Unneeded items can be "salvaged" so you can use them to upgrade other items.

### Rocket launcher




### Turret parameters

[Turret] Damage	1.232,00
[Turret] Range	8,11m
[Turret] Speed	0,20/s
[Turret] Crit.-Chance	5,50%
[Turret] Crit.-Damage	55,00%

[Team] Damage	6,75%
[Team] Range	2,75%
[Team] Speed	9,75%
[Team] Crit.-Chance	0,75%
[Team] Crit.-Damage	0,75%
[Team] Leben	3,00

[Skill] Rocket Focus  
The rocket launcher now fires all rockets at the targeted enemy

Inventory Slots: 2 / 90

Salvage items

3 / 3

0 / 23

### 3. Resistances

## Resistances

Physical	0%
Explosion	25%
Ice	0%
Fire	0%
Lightning	0%
Poison	0%

Starting from wave 20, the game will become more challenging, as enemies will gain increasing resistances to the damage types of the turrets with each wave. These resistances will increase by

1% per wave and will also change from wave to wave. The higher the wave reached, the more resistances will be present simultaneously.



However, in the long run, there will be options in the skill tree and through items to break these resistances.

## 4. Optimizations

In addition to the obvious new features, countless improvements, optimizations, and fixes have been made under the hood. This is essentially an ongoing process but, of course, a necessary one.

## 5. Future

This update adds new elements, but it also completely replaces some existing elements (like certain abilities) to create a more cohesive overall experience with more possibilities. Moving forward, we will stick to this update policy, releasing larger updates with significant functionality after longer periods, rather than the previously practiced regular updates with limited functionality. This approach simply allows us to develop a feature much more thoroughly because there isn't such extreme time pressure.

Well, let's see if everything comes together on time.

# CTD Development: Major Update in Progress

CTD usually receives new features, revisions, or adjustments on a weekly basis. However, in the coming weeks (or possibly months), there will be an apparent standstill. This is not due to a lack of motivation but because of the preparation of the most extensive update for the game since its development began.

## What does the update bring?

The update includes revisions and new features across all systems:

- **Game Server** (the game itself)
- **Socket Server** (the link between all systems)
- **Website**
- **API**
- **Database**

CTD caters to different target groups: from players who just want to shoot some zombies to those who want to get the most out of their turrets. The update will introduce deep mechanics to allow for the customization of turrets and further development of preferred play styles.

## Skill System

The current rudimentary skill system has always been communicated as a placeholder. The new skill system will be significantly more complex and less reliant on chance. Players can specialize in different areas. In addition to general attributes like "Increase Damage," there will be special abilities that will be expanded over time. An example would be a Nova Turret that no longer slows enemies but instead deals poison damage.

## Item System

CTD will introduce a comprehensive item system. While turrets don't have fingers for rings or hands for gloves, each turret will have a slot for the item "Advanced Turret Control." This control will offer abilities also found in the skill system - from basic attributes like increased damage, range, and speed to the ability to manipulate the Nova Turret.

These items will have various quality levels and can be upgraded to a limited extent.

## Long-Term Goals

Not every new feature will interest all players, and some may ignore them. However, CTD aims to be more than just a casual game and wants to give players the long-term opportunity to get the most out of their turrets and enjoy tinkering with the game.

# 31.05.2024 - Target modes / Dragon

## Reverted Changes

Two changes introduced in the last update have now been reverted:

### Prioritization by Lowest and Highest Health:

- The maximum possible health of different enemy types was used as the basis to prioritize the dragon or zombies instead of the actual health.
- This change caused issues and has therefore been reverted.

## New Target Modes

Instead, two new target modes have been added:

1. **Boss (weakest):**
  - Priority: Unicorns/Bosses > Dragon
2. **Boss (strongest):**
  - Priority: Dragon > Unicorns/Bosses

These target modes exclusively target bosses, unicorns (considered bosses due to their rewards), and the dragon, ignoring all other enemy types.

## Other Changes

- All other target modes do not target the dragon but continue to target bosses and unicorns as before.

Modus	Zombies	Unicorns / Bosses	Dragon
Slowest Enemy	+	+	-
Fastest Enemy	+	+	-
Least life	+	+	-

<b>Most life</b>	+	+	-
<b>Close to start</b>	+	+	-
<b>Close to goal</b>	+	+	-
<b>Boss (weakest)</b>	-	++	+
<b>Boss (strongest)</b>	-	+	++

++	Priority
+	Can be targeted
-	Can not be targeted

These changes make dragon hunting more challenging but also more tactical.

## Revamped Dragon

Without any prior announcement, a revamped version of the dragon was presented in the last stream:

- After being defeated, the dragon now reappears in a skeletal form with significantly increased health and can be defeated again.
- A higher reward is offered for defeating the dragon in its skeletal form compared to the initial stage.

# 29.05.2024 - Team-Damage / Fixes

## Changes

- Bleeding and burning now benefit from team damage from all sources.
- This also applies to solo damage.

## Fixes

- The incoming bomber now reliably marks targeted enemies again. A previous change had made this feature faulty and unreliable.
- Additionally, several minor corrections have been made in various places.

# 24.05.2024 - Power-Up Adjustments

**Power-Ups have been mostly limited for some time:**

- **Team Damage:** Unlimited
- **Team Range:** 30 uses
- **Team Speed:** 30 uses
- **Team Crit Chance:** 100 uses
- **Team Crit Damage:** 100 uses

**Adjustment for Team Speed and Team Range:**

Instead of the hard limits for Team Speed and Team Range, there is now a "soft" limit:

- **1-30 uses:** +1% per use
- **31-100 uses:** +0,5% per use
- **101-200 uses:** +0,1% per use
- **From 201 uses:** +0,01% per use

**Detailed Explanation:**

- The first 30 Power-Ups now give the full bonus of 1% each.
- The next 70 uses (31-100) each give only 0.5%.
- 101-200 uses each give 0.1%.
- From 201 uses, each gives only 0.01%.

**Example Calculation for Team Speed:**

If 100 Team Speed Power-Ups are used, the total bonus is no longer 100% but:

- **1-30 uses:** 30%
- **31-100 uses:** 35%

**Total: 30% + 35% = 65% Team Speed**

This change currently applies only to Team Speed and Team Range.

# 22.05.2024 - Skins

## Skins:

- **New Menu Item in the Shop:** The "Skins" menu item is now available in the shop section.

Skins are used to customize your turret.

## Currently Available Categories of Skins:

1. **Twitch**
2. **Season**
3. **"Lines"**
4. **Solid Colors**
5. **Hall of Fame**

## Skin Details:

- **Twitch Skins:**
  - There are 3 different Twitch skins.
  - These are automatically unlocked after a subscription (this may take a few minutes).
  - The higher the subscription tier, the more skins are unlocked.
- **Season Skins:**
  - These skins can be earned through activity and permanently unlocked.
  - Missed skins will be available for purchase with diamonds after a season delay.
- **"Lines" Skins:**
  - Animated skins in various colors.
  - Cost 250 diamonds each in the shop.
- **Solid Color Skins:**
  - The cheapest option at 50 diamonds per skin.
  - These skins are not animated and simply change the turret's color.
- **Hall of Fame Skin (Rainbow):**
  - A special skin unlocked once you appear in either of the leaderboards (Bits/Donations).
  - The skin will be removed if you are displaced from the leaderboards.

## General Rules for Skins:

- **Applicability:** Skins apply to the turret at all upgrade levels.

- For example, a skin purchased for your level 1 Gatling turret will also apply to all other levels up to 10.
- **Assignment:** Skins can be set in the CTD-HQ, but there will be an option to do this directly on the page in the future.
- **Cosmetic Adjustment:** Skins are purely cosmetic and provide no bonuses of any kind.
- **Diamonds:** Diamonds cannot currently be purchased or exchanged.

# 15.05.2024 - Dragon / Diamonds / Fixes

## Dragon Event

By popular demand, a dragon has been implemented as an event. Currently, it can only be summoned manually by the streamer and remains active until the end of the round. The dragon has an extremely large amount of health points and requires the cooperation of all players.

### **Targeting Mode Adjustment**

Turrets cannot target the dragon by default because the two targeting modes for the set path only aim at zombies. Therefore, it is advisable to switch to "Highest Health" so that the dragon is prioritized. It's important to maintain balance by not only changing the targeting mode for the dragon and ignoring the zombies.

### **Victory Reward**

If the dragon is defeated by wave 110, all players will receive a tier 4 chest. The usual rules for obtaining the chest still apply.

## Website

### **Menu Adjustments**

Several adjustments and corrections have been made to the c-td.de website. The menu navigation has been changed, and rarely used elements are now located in the menu at the top right when you click on your nickname.

### **Discord Widget Removed**

The Discord widget has been removed from the dashboard.

### **New Currency: Diamonds**

Diamonds have been added as a new currency in the header. They will be used in the future to purchase skins for turrets. Currently, diamonds can only be collected as the option to purchase skins is not yet available. Since diamonds are rewarded from level 4 chests, the display of the account balance is now required.

## Fixes

### **Rocket Launcher Targeting**

The targeting of the Rocket Launcher (all levels) has been corrected. Previously, there were situations where the turret would detect a target but could not aim at it. This mainly affected flying

enemies.

### **Gatling Level 1 Targeting**

The targeting of the Gatling level 1 has also been corrected. Similar to the Rocket Launcher, the turret would detect a target but could not aim at it. This issue did not affect normal enemies but was an issue for flying enemies. The turrets can now properly aim upwards.

# 01.05.2024 - Turrets / Lights / Bomber and Nukes

## Turrets:

The turrets underwent extensive revisions, particularly due to past issues with the Gatling turret. The main problem was an unreliable firing rate, which ultimately led to faulty behavior. Although target changes and turret rotations naturally cause fluctuations in the firing rate, maintaining a consistent performance was practically impossible. The extensive redesign now ensures that high firing rates can be reliably achieved.

In tests, this was even demonstrated with 200 shots per second.

In addition to the general adjustments, a new projectile firing system has been implemented.

All changes now apply for testing purposes only to the Gatling turret.

## Turret Spotlights:

In recent days, much effort has been devoted to replacing the turret spotlights with more realistic lighting effects. This made the game much more atmospheric at night.

Unfortunately, there were issues with the implementation on Windows, causing the game to crash when loading a map. This was a severe setback as it had been working fine all along and suddenly stopped on the CTD server.

It is hoped that these problems are due to a bug in the current engine version and can be re-evaluated at a later time.

## Bombers / Nukes:

Previously, bombers and nukes were activated as soon as a new wave began.

From now on, bombers and nukes will only be launched after the last enemy of the current wave has appeared.

This change increases the difficulty level, especially in very long waves, such as wave 110, but it also avoids wasting bombers and nukes on individual targets at the start of a wave.

# 17.04.2024 - Optimizations / Fixes

## Optimizations

An extensive revision and optimization of the game has been conducted, resulting in a remarkable reduction of the project size by 32 GB, significantly shortened compilation times, and a reorganization of the code. Although the game itself is compact, the underlying project remains relatively enormous.

## Server Communication

Previously, connection disruptions posed a challenge in the game, as the connection could not be restored correctly. This issue has now been addressed, ensuring seamless continuation of the game even after extended interruptions or IP changes. During an ongoing round, the game pauses and awaits server clearance to automatically resume.

## Rocket Launcher

The rocket launcher has undergone several optimizations, including improved targeting and resolution of a shooting issue. While this did not affect damage calculation, it notably enhanced the game's performance.

## Nova Towers

A minor bug affecting the targeting of Nova Towers, leading to unnecessary delays in target acquisition, has been fixed. Additionally, the new effect has been seamlessly integrated into the game.

# 05.04.2024 - New Spawnsystem / Adjustments

We have now tested the new version of the game on two evenings, and after encountering a few bugs and minor issues, this version is now the basis for further development.

The cause of the memory leak discovered on Wednesday was identified fairly quickly and fixed.

## New Version

The new version mainly features a massive rebuild of several core systems that have existed since the beginning and were rather primitive due to lack of expertise.

## Spawn System

The core of a tower defense game is the spawn system, which determines when, where, and which enemies appear on the battlefield. The old system offered few options:

- Which enemies can appear
- How many per wave
- Spawn interval

In this case, the chosen types of enemies were random, and for most situations, it was sufficient. However, it wouldn't have been possible to spawn a boss with 10 other enemies because randomness would have determined the number of bosses.

The new spawn system is much more sophisticated:

- Which enemies can appear
- Whether they should be randomly chosen or the number should be fixed
- Spawn intervals
- Sub-waves - It is now possible to define additional waves with their own intervals, delays, etc., which appear parallel to the main wave. This allows for an infinite chaining of various spawn behaviors within a wave.
- Where should the enemies spawn: randomly or sequentially

The new spawn system will naturally be further expanded over time, but the groundwork for a highly extensible system has been laid. The most important extension now is the ability to save entire rounds as templates and simply load the desired template at the start of the game. Thanks to the templates, it would now be possible, for example, to define a unique gameplay flow for each

map or to implement game modes with an endless mode without having to delete and reconfigure all waves each time. It would also be possible to have zombies as enemies today and demons tomorrow. However, for now, there is only one template in the proven configuration with a few minor adjustments.

## Adjustments

The lightning tower has been revised and no longer fluctuates as much in its damage output. The technical process is relatively simple: Due to its ability to shoot chain lightning, this tower is actually designed to hit the maximum number of targets, but for a boss, for example, this is not possible. In the past, the lightning tower received a damage bonus against bosses so that it wouldn't be entirely useless, but the solution wasn't optimal either because this rule applied to all levels.

Now, just before firing, the lightning tower determines the number of possible targets and grants a damage bonus based on the number of targets. So, if the tower can hit 10 targets and there are only 8 within range, all 8 targets will receive increased damage. The fewer targets, the higher the bonus. The bonus also corresponds to the maximum damage:

If the lightning tower can hit 10 targets, each dealing 1000 damage, the damage pool is 10,000. If it can only reach 5 targets, each enemy will suffer 2000 damage. For a boss, it would then be 10,000 damage with a single hit - the full blast.

# 16.03.2024 - Trivial things

## Trivial things

The !Craft game has been shortened from 120 to 60 seconds.

Missions have significantly reduced SC rewards.

The scaling of life energy that was integrated yesterday via hotfix has been reset and now only applies from wave 101 to 110.

# 15.03.2024 - Lightning / Support towers

## Lightning

The effect of the lightning towers has been replaced and substituted with another.

## Support Test

Support towers now have direct effects on the damage of the bomber and the nuke. Each support tower on the battlefield increases the damage of both power-ups by 100% each.

So, with 3 support towers, the nuke power-up no longer deals 1,000,000 damage but 4,000,000 damage.

## Corrections

Some corrections have been made, but unfortunately, a few minor, persistent bugs still exist. For example, the death animation of the zombies doesn't always correspond to the desired effect.

# 13.03.2024 - Missions / UI

## Missions - New Freedom for Players

Previously, many players found missions to be disruptive as they heavily influenced the gameplay experience. For instance, players who wanted to try a specific skill set with a turret felt disadvantaged when corresponding missions weren't available. Additionally, players often had to switch turrets during gameplay to complete as many missions as possible, disrupting the flow of the game.

That's now a thing of the past.

The new missions no longer impede player choice. Now, every player can choose their preferred turret and skill set since missions can now be selected as a set. For example, if one wants to play with a Gatling turret with bleeding damage, they simply choose the "Status Effects" set and receive 23 missions to complete in the current round.

Most missions still reward with gold coins, but some now also reward with silver coins. All turrets receive 23 missions, which mostly do not differ. In fact, currently only 6 of these missions vary from turret to turret.

## Important

After placing the turret, a set of missions can be selected directly, and this set is bound to the chosen turret for the current round. So, if one logs out or gets disqualified, the missions associated with the turret will be cleared, and a new set must be chosen when they want to participate again.

## UI

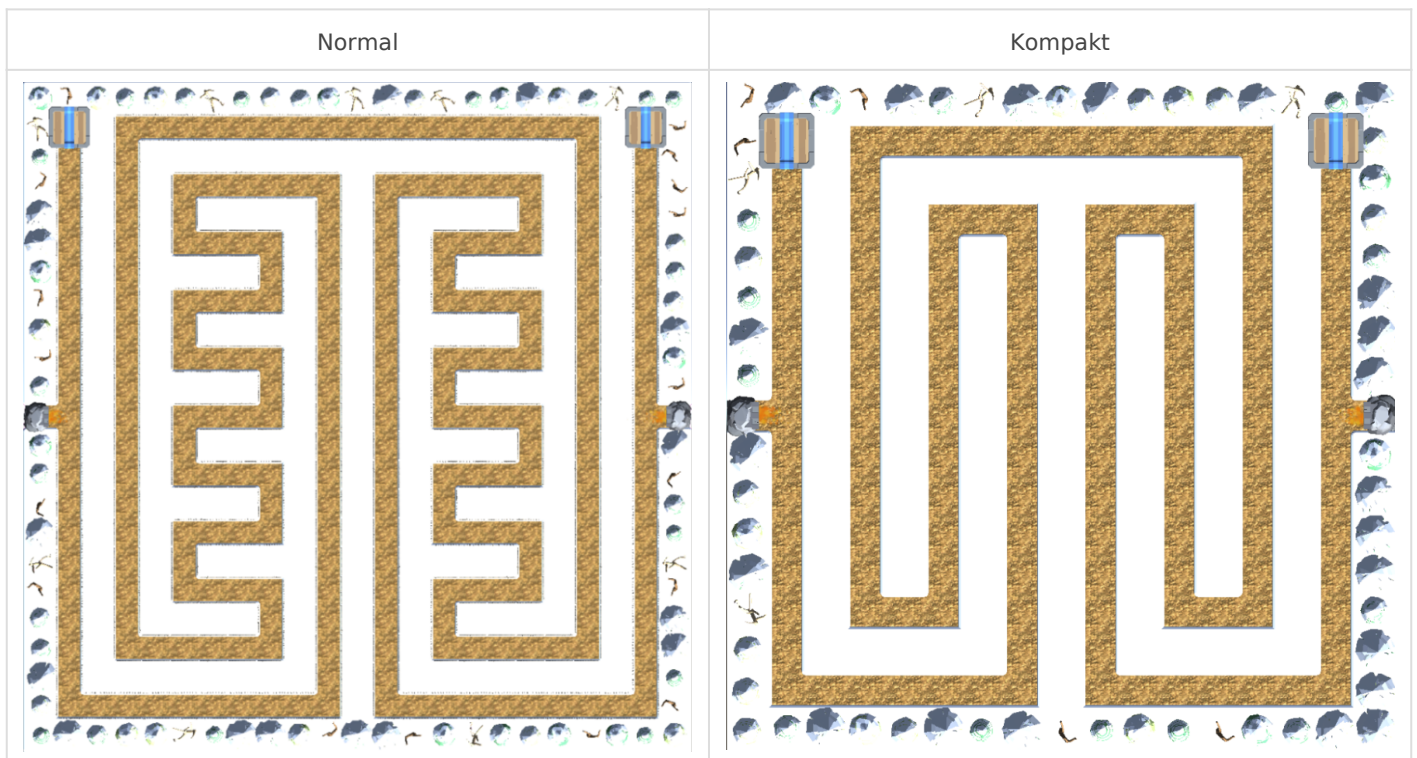
The statistics overview has now been expanded for support turrets, as they introduce the "Buff Value" for missions. The Buff Value results from the skill set, the buffed time, and the number of affected turrets multiplied by it.

# 09.03.2024 - New map / Optimizations

## New map

After the new map was well received yesterday despite its massive size, a compact 17x17 variant has now been implemented into the game.

The map is now the same size as the Spiral, offering a good alternative to prevent playing the same maps over and over again.



## Optimizations

Internally, things are constantly changing at CTD; elements are being reworked or sometimes even rebuilt entirely.

In today's test run, changes to the Bomber, Gatling, and Railgun are being tested. The hope now is to significantly improve performance and reduce or eliminate frame drops.

While there's still a challenging road ahead to reach optimum performance, every improvement contributes to enhancing the overall experience.

If everything works correctly, players won't notice any difference, as the optimizations are purely technical in nature.

# 08.03.2024 - Maps / Fixes

## Maps

Recently, the number of playable cards, or maps, was a bit sparse because of extensive rebuilding, requiring the creation of new maps. Currently, there are only ice and green area maps available, but desert maps will soon be revitalized. The necessary adjustments have become somewhat more complex, as now the nuke dynamically interacts with trees and other elements, but this painstaking work will enable more flexible creation of new maps in the future.

### New (old) maps

Additionally, five old maps are now back in the game, but three of them are merely event maps that are not always played. In line with the upcoming Easter season, the Easter Bunny head is now also included.

Ice 2

Ice 3

Halloween 1

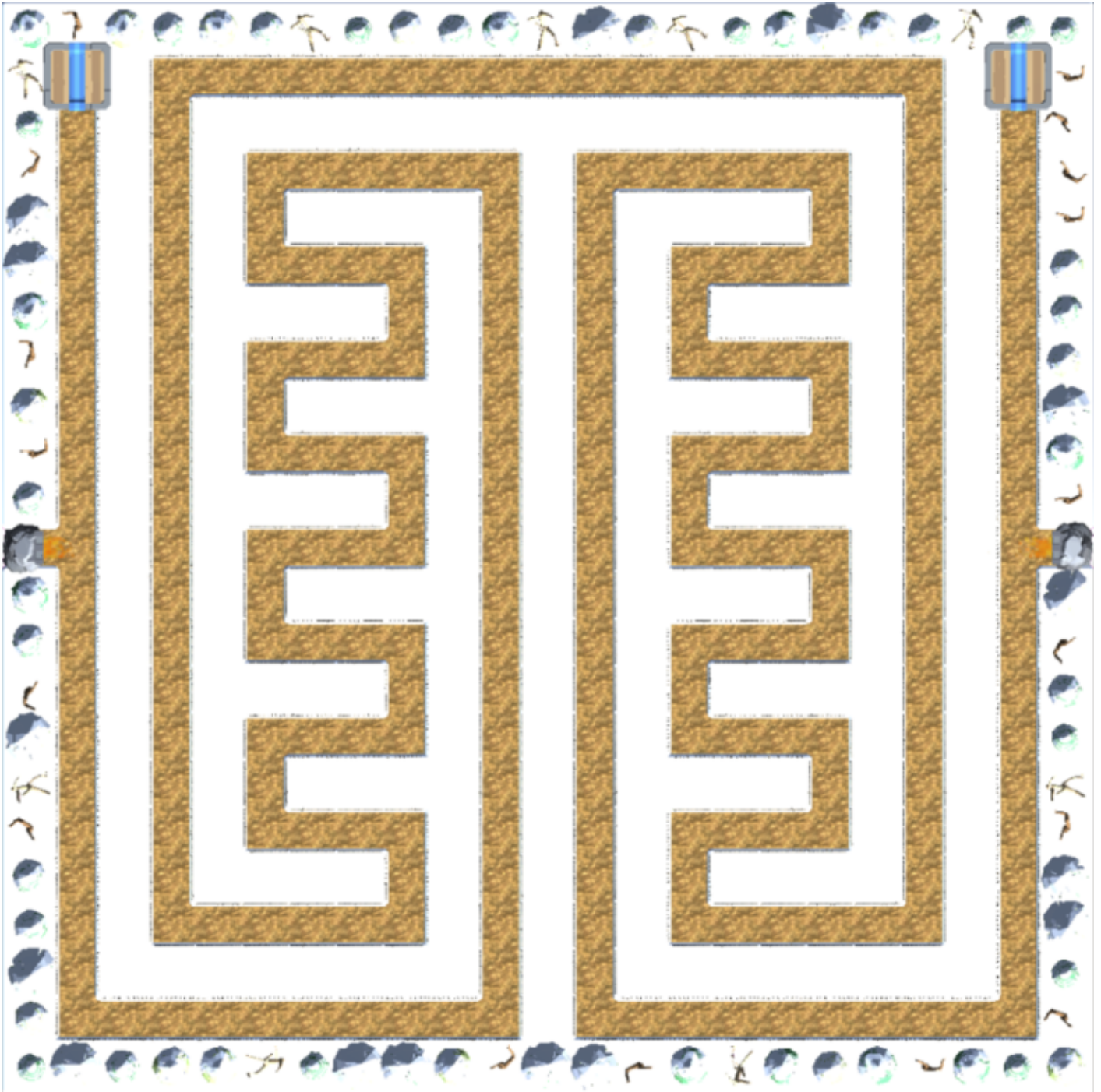
Easter 1

Xmas 1

## New map

On a whim, a new map has been implemented into the game, currently bearing the name "Ice 4".

This is the largest map ever introduced into the game, measuring a whopping 23x23 squares. With 200 building slots, extremely long pathways, and a lot of time-consuming gameplay, it offers a significant challenge.



## Fixes

For a long time, the preview of the turrets on the battlefield had the same parameters (bars) for damage, range, and attack speed. This has now been corrected, as it somehow went unnoticed.

In the game itself, there has been an issue with categorizing cards in the tabs of difficulty levels (card selection in the main menu) for quite some time. This bug has finally been identified and fixed.

The map Test1 has now been permanently immortalized in the game under the name "Random1" and has been slightly adjusted in difficulty. In particular, bosses now scale a bit less steeply.

Additionally, there have been numerous adjustments and corrections in the game's code itself. For example, it was possible for the bomber's rockets to linger indefinitely on the battlefield in the target tower if a zombie deducted a team life at the moment of impact.

# 02.03.2024 - Fixes

## Fixes

- Fixed significant issues with the rocket launcher from level 7 onwards. Due to a bug in the game, it was only dealing 40% of the intended damage.
- Damage calculation for critical status effects (especially bleeding) contained a calculation error that could lead to a sudden increase in damage.
- In a Game Over scenario, it was possible for the zombies' life bars to overlay the interface.

# 23.02.2024 - Additional effects / Fixes

## CTD

In the latest update, a few effects were tested, and after being well-received, more were added.

- Bleeding zombies now have blood splatters around them for the duration of the effect.
- Slowed zombies have a small lightning effect around them.
- A poisoning effect has also been implemented for future use.

Death animations have also been expanded.

- Died from bleeding.
- Died from lightning tower.

## Fixes

- The unicorn had an incorrect texture after the last update and was almost entirely transparent.
- The worm (phase 2 of the second boss) had an issue with the new effects - this should hopefully be resolved now.

# 21.02.2024 -

## Skins/Effects/Fixes

### CTD

The size of the health bars has been reduced to ensure a less intrusive display.

All status effect icons have been removed from the health bars.

Status effects are now visualized directly on the zombies. Burning effect is the first to be implemented.

Zombies now have several different visible "death animations".

The unicorn's lighting has been improved, making it more recognizable and sparkling.

Various effects, such as explosions caused by the Bomber, have been exchanged.

Corrections

### Corrections

A bug causing "Boss 2" to crash the game under certain circumstances when taking too much damage before its explosion has been fixed.

Health bars were causing a variety of errors under certain conditions, which have now been corrected.

Boss textures have been fixed after being incorrectly displayed in the last stream.

### Skins

The first skins are now available:

Twitch Sub 1 - This skin is unlocked as long as a Tier 1 subscription is active.

Twitch Sub 2 - This skin is unlocked as long as a Tier 2 subscription is active.

Twitch Sub 3 - This skin is unlocked as long as a Tier 3 subscription is active.

Rainbow - This exclusive skin is reserved for players who have immortalized themselves in the Hall of Fame (CTD HQ).

The skins will be automatically unlocked as long as the corresponding conditions are met. For example, if a subscription expires, the associated skin will also be automatically deactivated.

In the coming weeks, an additional 15+ skins will be unlockable.

### CTD HQ

An issue where incorrect skin settings were loaded has been fixed.

## Known Issues

There are still minor display issues with certain skins at the Nova Tower in the CTD HQ.

# 16.02.2024 - Skins / Changes

## CTD

- Internal optimizations to the calculations of status effects  
Although the effects themselves haven't changed in terms of values, the calculations have been completely revised and optimized.
- Zombie health bars  
The health bars of the zombies were previously implemented in a quick and dirty manner. Since this unnecessarily consumes resources, everything has been overhauled here as well, opening up many new possibilities.
- Support towers have received a new function for testing purposes  
If a zombie, boss, or unicorn dies within the radius, all players receive double the amount of credits (in-game currency) for the kill.

## Fixes

- Tower spotlight fixed.
- The range indicator of the support tower now displays the range indicator in the game instead of the tower's texture.
- Gatling projectiles slightly reduced in size visually.
- Corrections made to the Gatling gun.
- All turret skins standardized in color.
- Unicorns now grant fewer credits upon death - the value has been adjusted to match bosses (50).

## Skins

- Skins will remain randomly assigned for now.

# 14.02.2024 - Skins / Changes

## Skins

Currently, each turret contains 15 different skins, which contribute to the long-term customization of the turrets.

It is currently not possible to unlock skins.

Initially, the focus is much more on testing the effects in the game, so currently, each turret placed in the game is given a random skin.

## CTD

The game has long had the ability to increase game speed through power-ups, but the approach was never meaningful, as it simply increased the overall speed of the entire game and all processes.

In the current version, a different approach has been chosen because turrets, zombies, projectiles, etc. now use a shared multiplier to simulate calculations according to the desired game speed.

Specifically affected currently are:

- Turrets (fire rate / maximum rotation speed)
- Status effects (such as how often, for example, the burning effect ticks)
- Power-ups (how fast the bomber flies)
- Enemy walking speed
- Projectile speed

## CTD HQ

Feel free to take a look :)



# 24.01.2024 - Chests / Shop

C-TD.de

## Chests

- Chests now generally no longer contain any power-ups. Silver coins have been added instead.

## Shop

- Power-ups can now be purchased as desired for silver coins in the shop.

## Missions

- Power-up missions now only count the use of team power-ups, so that bombers and nukes are not just wasted on missions at strategically unfavorable times.

## Miscellaneous

Minor corrections and adjustments have been made. For example, the booking total in the transactions is now displayed in red or green so that the booking type is easier to recognize.

# 17.01.2024 - Wiki / Changelog

CTD finally gets a place for all kinds of information.

The system used for this is quite powerful and offers interesting functions.

Would you like to help maintain the information? In German, English or even another language?  
Simply contact us at [support@c-td.de](mailto:support@c-td.de) or in the Discord and we'll take a look.