HλLF-LIFE® ²

UPDATE

The Source Engine

> Valve's revolutionary Source engine combines cutting-edge character animation, advanced AI, real-world physics, shader-based rendering, and a highly extensible development environment to create some of the most popular and realistic video games of all time.

> Video games using the Source engine have a tradition of creating some of the most visually stunning gameplay experiences on modern-day hardware, while also scaling smoothly on-the-fly on older systems.

> Fast, reliable, and flexible technology with the ability to render computationally intensive video game environments. Featuring the highest-performing shader-based rendering available to all game developers, it allows devs to quickly create the most complex scenes with relative ease.

> Source's renderer takes advantage of advanced processor technologies such as SIMD and multi-core in addition to the latest GPU features via DirectX. The result ? Visions are brought to life in stunning detail!

> Compatible with popular graphics and 3D modeling software allows developers to create realistic models, weapons, props, vehicles, and more all within Source.

Thanks to Source's comprehensive, road-tested collection of tools—the same used to create Team Fortress 2, Portal and the Half-Life 2 series—your team's time and effort can be spent building creative gameplay and unique content rather than fundamental systems such as rendering technology or network code or collision detection.

Half-Life 2: Update

> The goal of Half-Life 2: Update is to fix up, polish, and visually enhance Half-Life 2, without ever changing the 2004 original's core gameplay, or time-tested style.

[**Developed by Filip Victor**] Half-Life 2: Update is the most visually advanced, fully-featured, and stable version of Half-Life 2 to date, with updated lighting, improved fog, new visual effects, and an extensive Community Commentary Mode.

> Bugs and issues have accrued within Half-Life 2 over the past 10 years. Half-Life 2: Update fixes many of these issues including bad triggers causing scenes and battles to not cue properly, or strange-looking character animations breaking believability and player immersion.

[Actual in-game screenshots]

[**Community**] The very dedicated Half-Life community has provided an extensive listing of countless bugs and glitches present within Half-Life 2. This large pool of information was very useful in the update's development, with many of these issues, in addition to many others, having been resolved in the final version.

New Advanced Features

> Detailed Shadows
> Light Rays
> Particle Effects
> High Dynamic Range

Improved Features

> Water Detail
> World Reflections
> Collision System
> Scripted Sequences

Shadow & Lighting Overhaul

> Half-Life 2: Update fixes many persistent lighting issues within Half-Life 2's environments. Old blocky shadows have been given a smoother and more detailed appearance, oddly-lit objects now look natural in their environment, and light no longer passes through solid geometry.

Half-Life 2   Update

> The Source Engine's lighting system handles shadow detail on a surface-by-surface basis. This means that each wall, floor, or ceiling has to be individually considered and manually adjusted in order to optimize for both detail and performance. Light from nearby light sources leaves sharp, crisp shadows, while ambient sunlight leaves a smoother, softer edge.
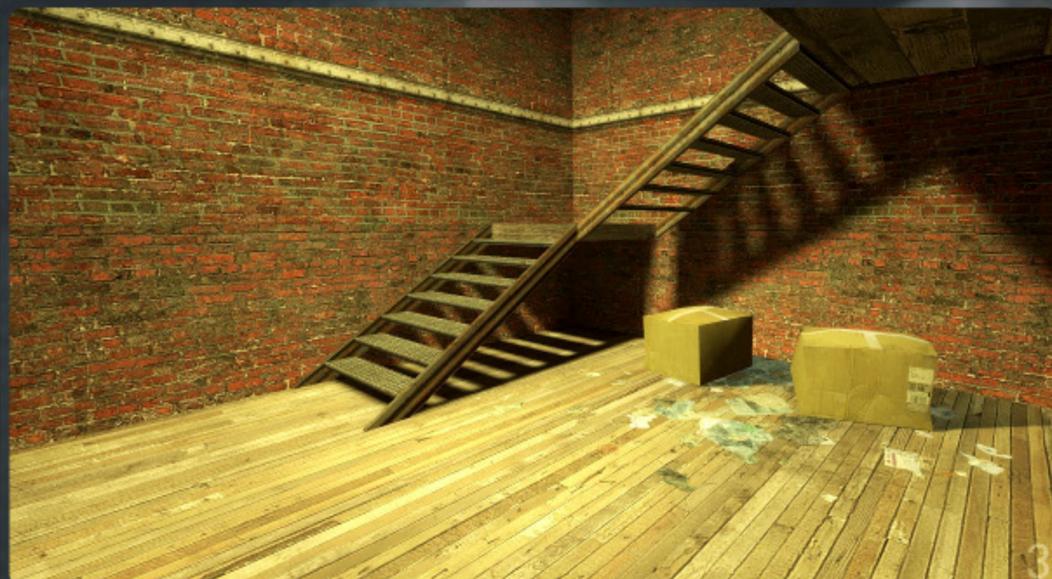
Interior Lighting

> Lighting has been completely redone in certain interior areas to create a more natural look. Rooms originally lit by cold invisible light sources have been opened up and revamped into rooms illuminated by the natural light of already-existing windows, creating a more open and connected environment.

> Half-Life 2's style is very distinctive. Its color palette is muted, and its shadows have soft edges. All aesthetic decisions for Half-Life 2: Update were made to maintain a balance between the classic style, and the realism of modern gaming.

High Dynamic Range

> High Dynamic Range Lighting (HDR), only partially utilized in Half-Life 2 is present in every area of Half-Life 2: Update, enhancing overall consistency, immersion, and believability.

[Fixed Aperture]   [High Dynamic Range]

> HDR is used to simulate how real-world eyes adjust to light, making lights brighter in an otherwise dark area, and darks more intense in an otherwise light area. These light levels adjust as the player moves from area to area thanks to dynamic tonemapping, a feature which can also increase visibility in dimly-lit areas.

[**Half-Life 2: Lost Coast**]

[Fixed Aperture]   [High Dynamic Range]

> A comparison of fixed-aperture and high-dynamic-range rendering in Half-Life 2: Lost Coast.

Half-Life 2: Lost Coast is a playable tech-demo made by Valve to demonstrate HDR in the Source engine.

Note some of HDR's visual effects, including:

Bloom effects in the skybox and in water reflections.
The shine on the wet sand and wet rocks.
A slight blurring effect of the horizon near the sun.

Environmental Fog

> Often forgotten or underestimated, well-executed fog can drastically change the atmosphere of an environment, giving it life and personality.

> Half-Life 2's original fog mostly consisted of a grey/blue haze effect in the distance. This style of fog added atmosphere, but didn't blend in well with each level's color scheme or each map's skybox leaving strange-looking silhouettes in the distance.

Half-Life 2   Update

> Half-Life 2: Update's fog has been carefully adjusted with color choices that blend into each level's skybox. Used properly, these effects add depth to each open vista, and provide a unique color scheme to each chapter, visually separating them from each other.

Enhanced details

> PC hardware has come a long way in the past 10 years, making several optimization techniques from the original Half-Life 2 unneeded. Removing these old features can really add detail and improve the game's overall look.

> Object fade-in and low-poly model-swapping have been removed, creating more expansive horizons and removing pop-in that is all-too-obvious with modern HD or 4K displays.

> New details have been added as well, with light rays pouring in through windows and cracked ceilings, flies hovering around dead corpses, radioactive haze, waves crashing against rocks, smoke effects, and more intense explosions.

> Enhanced Backdrop details have been added to replace old low-poly models that were very obvious, distracting, and often not fitting of a level's theme.

Community Commentary

> Ever since the release of Half-Life 2: Lost Coast, Valve has included a Developer Commentary mode within nearly every large release since, including Half-Life 2: Episode One, and Half-Life 2: Episode Two. Half-Life 2: Update adds this feature to Half-Life 2 in the form of a Community Commentary.

[Example of in-game Commentary Node]

> Written by lead writer **Zachary Howlett** and other members of the Half-Life community, this commentary contains over 100 commentary nodes (with more to come) containing information on Half-Life 2's design, development, and impact on gaming gathered from interviews, video material, Half-Life 2: Raising the Bar, and community analysis of the game's story and level design.

> Spoken by familiar voices including popular Youtubers, such as: **Caddicarus**, **Brutalmoose**, **Rice Pirate**, **ProJared**, and **Balrog the Master** (all courtesy of Did You Know Gaming), along with the creator and voice behind Freeman's Mind, **Ross Scott**.

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Final Notes

About the Developer

Filip Victor was born in 1989 in Iasi, Romania. He discovered his passion for computers at the age of ten through frequent tinkering, experimenting, and learning. In 2009, this self-thought experience earned him a job in computer repair where he continued to hone his skills, and began exploring game development.

Development of Half-Life 2: Update Version 1.0 started as an experiment, but following its release in 2009 it became a great success within the Half-Life community. This lead to coverage of his fan-made update being published on many top gaming and technology websites, with over 250,000 downloads.

With an all-new version of Half-Life 2: Update coming to Steam as a standalone update, he hopes to raise the bar even higher.
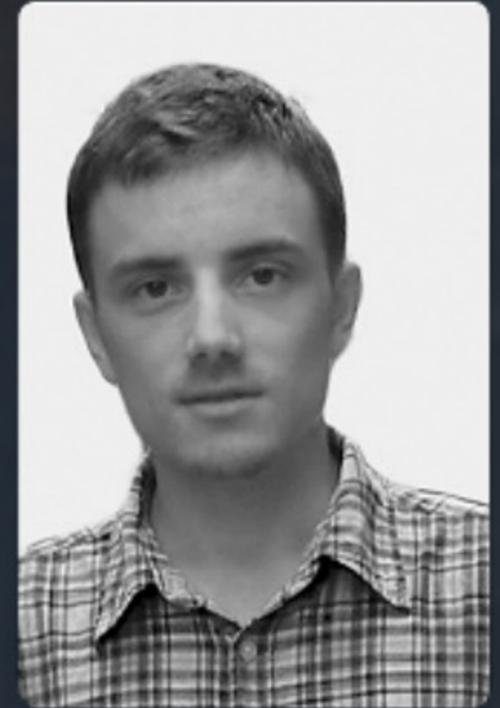
"The unexpected success of the first version of Half-Life 2: Update was a wonderful surprise. Its popularity has given me many opportunities including working with Valve to bring this new version to Steam, and working with Did You Know Gaming? and Ross Scott to create the Community Commentary. In return, I wanted to ensure that the update was something that would be enduring, and worth the time it takes to play it. I hope that both newcomers and veterans of the Half-Life series will enjoy seeing the work that went into its creation.
Thank you for your patience, thank you for your time, and thank you for playing." **- Filip Victor**

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Questions and Answers

Q: What is Half-Life 2: Update? A mod, or an actual update for the original Half-Life 2?

A: Half-Life 2: Update is a community-developed standalone version of Half-Life 2 that includes fixes and upgrades to many aspects of the original, based on community feedback. Half-Life 2: Update does not work like an "actual" update that is installed onto the original game, however, you must own the original Half-Life 2 in order to install Half-Life 2: Update. Installation of the original Half-Life 2, or any of the episodes is unnecessary.

Q: Does Half-Life 2: Update feature new textures or custom models like other mods out there?

A: Half-Life 2: Update does not feature any custom textures or models. While this decision has been criticized, we have found that the more assets we replace, the less and less the project resembles Half-Life 2. We want our version of Half-Life 2 to be updated, but to still be a complete, unaltered Half-Life 2 experience. That being said, the update's lighting overhaul has given the models and textures a more crisp appearance.

Q: Is Half-Life: 2 Update in "competition" with other Half-Life 2 improvement mods?

A: Half-Life 2: Update does not try to compete with other visual-remaster mods, mostly for the reasons mentioned in the previous question. "We want our version of Half-Life 2 to be updated, but to still be a complete, unaltered Half-Life 2 experience." Large changes like adding new areas, large amounts of new geometry, new models and textures, or dynamic world lighting would pull Half-Life 2: Update farther away from the original than we want to go.

Q: Will Half-Life 2: Update receive automatic updates via Steam? (engine changes, additional fixes, etc.)

A: Yes! Any updates that the original Half-Life 2 receives will also be applied to Half-Life 2: Update, as well as community fixes or any other changes created exclusively for the update. Just check the Steam Update Changelog or our Steam group to see what's new!

Q: How large was this project's team? How long did it take to create?
Did you receive any help from Valve?

A: Half-Life 2: Update was developed entirely by Filip Victor over the course of about 3 years, with the support of writer/ PR manager, Zachary Howlett. Valve certainly supported the project, but their direct involvement only encompasses helping the project to release on Steam.

Q: Will we see Filip Victor's updates to the Half-Life 2 Episodes any time soon?

A: It's been considered, but right now it's still up in the air. Depends on a lot of factors that cannot be foreseen. To keep on top of news regarding the Update or any new developments, join the official Steam group.

Q: Will Half-Life 2: Update be ported to Source 2 later?

A: A port to Source 2 as we currently know it won't provide any dramatic changes unless the game were to be rebuilt from the ground up! If, over time, directly porting the game to Source 2 seems to have some inherent benefits, it will be considered.

Q: Why did the update take so long to develop? Was it difficult?

A: Well, besides the fact that there was only a single developer, it was challenging to create visual improvements that made the game look better without compromising Half-Life 2's art style. This means that each map had to go through many, many iterations and meticulous testing before a final version was created. This takes time and a lot of dedication.

Q: Half-Life 2: Update features HDR. Does it have LDR (Low Dynamic Range) as well?

A: Yes! Half-Life 2: Update fully supports LDR for those who play on hardware that does not support HDR.

Q: I want to submit a bug report or some ideas. How can I contact you?

A: The best way is to submit it to the official Steam group. However, if you want to reach us directly, we can be contacted at hl2update@hotmail.com. For business inquiries filipvictor@hotmail.com

ORIGIN

The Genesis Pro

Genesis Pro from Origin was the most valuable asset available for developing Half-Life 2 Update. While the performance was outstanding, the feature that stood out the most was the rock-solid stability; Genesis Pro was able to compile and render complex scenes for hours without any trouble. Genesis Pro is the definite choice for top notch gaming and efficient game development. -Filip Victor

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> Rediscover the unique world of Half-Life 2, re-mastered by Filip Victor using state-of-the-art visual effects, while maintaining its signature ambience and art style.

> Powered and developed using technologies such as the NVIDIA GeForce GTX 980, HL2: Update provides a richer and more visually interesting experience, tapping into the latest graphical development techniques to offer a truly re-vitalized rendition of one of the greatest games of all time.

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FILIP VICTOR

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