Zcash (ZEC) Explained: The Complete Guide to Private Digital Payments in 2026

Published Date: September 17, 2026

Topic: Zcash (ZEC), privacy cryptocurrency, shielded transactions, zero-knowledge technology and digital payments

Introduction to Zcash

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Zcash is a cryptocurrency designed around an idea that is increasingly important in the digital economy: financial privacy. While many blockchain networks make transaction information publicly visible, Zcash gives users the ability to use shielded transactions that protect important financial details. The project describes Zcash as encrypted electronic cash and provides both transparent and privacy-focused transaction options.




Zcash uses the ticker symbol **ZEC**. It was introduced in 2016 and was developed from technology related to Bitcoin while adding advanced cryptographic privacy features. The primary goal is not simply to create another digital currency, but to give people greater control over how their financial information is exposed when they send or receive cryptocurrency.

For anyone researching Zcash in 2026, it is useful to understand the difference between the ZEC cryptocurrency itself and the privacy technology built into the network. ZEC can be held, transferred and used for payments, while the underlying Zcash protocol provides shielded transaction functionality designed to keep sensitive transaction information away from public blockchain observers.

The Zcash ecosystem has also continued evolving. In July 2026, the Zcash mainnet activated the NU6.3 network upgrade, known as Ironwood. The upgrade introduced a new shielded pool and changed how funds associated with the previous Orchard pool move through the network. This makes understanding current Zcash software and wallet support particularly important for users today.

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What Is Zcash (ZEC)?

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Zcash is a decentralized cryptocurrency that allows people to transfer digital value without requiring a traditional bank to process the transaction. Its most recognizable feature is its privacy technology.

Traditional public blockchains generally expose transaction information through a public ledger. Depending on the network, observers can often examine wallet addresses, transaction amounts, balances and transaction histories. Even when a blockchain address does not directly display a person's name, blockchain analysis can sometimes connect addresses with real-world activity.

Zcash was designed to provide another option. Users can utilize shielded transactions in which transaction information is protected through cryptographic techniques. Zcash documentation explains that shielded transactions can protect information such as addresses, transaction history and transaction amounts from public blockchain visibility.

This approach makes Zcash particularly relevant to discussions about financial privacy. Privacy can be useful for ordinary financial reasons. A person may not want strangers to see how much money they have, what businesses they pay, how frequently they make payments or how much they send to another person.

Zcash therefore focuses on giving users a choice between transparency and privacy rather than forcing every transaction into a single model.

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How Does Zcash Work?

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Zcash uses blockchain technology to record transactions while incorporating zero-knowledge cryptography for shielded activity. The concept behind a zero-knowledge proof is powerful: one party can demonstrate that a statement is valid without revealing all of the underlying information used to prove it.

In practical terms, this allows the Zcash network to verify important rules about a shielded transaction without publicly revealing all of the financial information contained within that transaction.

The Zcash protocol specification describes the network as combining a transparent payment system with a shielded payment system secured through zero-knowledge succinct non-interactive arguments of knowledge, commonly known as zk-SNARKs.

You do not need to become a cryptographer to use Zcash. Wallet software handles most of the complicated cryptographic processes. For everyday users, the important concept is that the technology allows the network to verify transactions while giving users a stronger privacy option than a conventional transparent blockchain.

## Blockchain verification and privacy

Privacy does not mean that transactions are invisible to the Zcash network. The network still needs to verify that transactions follow the protocol rules and that funds are not improperly created or spent.

The distinction is that shielded transaction information is cryptographically protected from ordinary public observation. This creates a balance between blockchain verification and financial confidentiality.

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What Is ZEC?

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**ZEC** is the native cryptocurrency of the Zcash network. When people discuss buying Zcash, holding Zcash or sending Zcash, they are generally referring to ZEC.

ZEC can be used for cryptocurrency payments, transfers and other activities supported by the Zcash ecosystem. Like other digital assets, its market value can change over time based on supply, demand, market conditions, adoption, liquidity and broader cryptocurrency trends.

It is important to separate the usefulness of Zcash technology from short-term price movements. A privacy network can have technological value even when cryptocurrency markets are experiencing significant volatility.

People researching ZEC should therefore consider two separate questions: how useful is the Zcash network for the purpose they have in mind, and what level of market exposure are they comfortable with when dealing with the ZEC asset?

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Zcash Shielded Transactions Explained

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Shielded transactions are one of the most important features to understand when learning about Zcash.

A transparent cryptocurrency transaction generally leaves transaction details visible on a public ledger. Zcash also supports transparent addresses, but shielded addresses provide a different model where transaction information can be cryptographically protected.

According to the official Zcash educational material, shielded Zcash can keep financial information private, while transparent addresses expose transaction information publicly.

This distinction matters because simply owning ZEC does not automatically mean every transaction is private. The wallet, address type and transaction method being used all matter.

For users who specifically want financial privacy, understanding whether a wallet is shielded by default can be an important part of choosing software. Zcash's official ecosystem information highlights wallets designed around shielded use.

## Why shielded transactions can be useful

Financial privacy can help protect ordinary users from unnecessary exposure. Imagine receiving payment for freelance work. On a completely transparent blockchain, someone who knows your address could potentially examine your transaction history and discover information about other payments associated with that address.

A shielded transaction model can reduce this type of public exposure.

Privacy can also be useful for businesses, charities, independent contractors, travelers and people who simply believe financial activity should not automatically become public information.

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Zcash Transparent vs. Shielded Addresses

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Zcash has historically supported both transparent and shielded transaction models. Understanding this difference is essential for new users.

## Transparent transactions

Transparent transactions operate more similarly to conventional public blockchain transactions. Transaction information can be visible through blockchain explorers and other public analysis tools.

This approach can be useful when transparency is required or when a particular service only supports transparent ZEC transactions.

## Shielded transactions

Shielded transactions are designed to protect financial information using Zcash's privacy technology. Depending on the wallet and protocol features being used, information about the transaction can be shielded from ordinary public blockchain observers.

Users interested in privacy should pay attention to wallet support rather than assuming that every Zcash wallet provides the same experience.

The official Zcash guide specifically recommends checking whether a wallet or service supports shielded transactions when privacy is an important goal.

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What Are Zero-Knowledge Proofs?

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Zero-knowledge proofs are a cryptographic technology that allows one party to prove that something is true without revealing all of the information behind the proof.

A simple non-technical analogy is a locked box. Imagine proving that you know the combination to a locked box without telling another person the combination. You demonstrate knowledge without revealing the secret itself.

Zcash uses zero-knowledge cryptography to help verify shielded transactions while protecting transaction details.

This technology is one reason Zcash is frequently discussed in research involving blockchain privacy, cryptography and decentralized financial infrastructure.

For everyday users, the most important point is that zero-knowledge technology is not simply a marketing term. It is part of the underlying cryptographic design used to support Zcash's shielded payment functionality.

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Zcash and Bitcoin: What Is the Difference?

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Zcash and Bitcoin share historical and technical connections, but their approach to transaction privacy is different.

Bitcoin transactions are recorded on a public blockchain. Although Bitcoin addresses are not necessarily labeled with a person's legal identity, transaction information is publicly available and can potentially be analyzed.

Zcash was developed using the Bitcoin code base as a starting point while introducing additional privacy technology.

The biggest difference for users is therefore the privacy model. Zcash provides a shielded transaction system that can encrypt important transaction information, whereas Bitcoin's standard transaction system is transparent.

This does not mean Zcash and Bitcoin have identical purposes. Bitcoin is widely recognized as a decentralized digital asset and payment network, while Zcash places much greater emphasis on financial privacy.

Someone comparing the two should focus on their actual goals. If public transaction visibility is acceptable, a transparent blockchain may be sufficient. If financial privacy is a major consideration, Zcash's shielded technology becomes especially relevant.

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# Zcash in 2026: Understanding the Ironwood NU6.3 Upgrade

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Zcash continued to evolve during 2026. One of the most important developments for users this year was the activation of the NU6.3 network upgrade.

According to the official Zcash upgrade documentation, Ironwood NU6.3 activated on the Zcash mainnet on July 28, 2026, at block height 3,428,143.

The upgrade introduced a new shielded pool intended to strengthen network security and make the integrity of the circulating supply independently verifiable. The upgrade also restricted the original Orchard pool, with funds leaving Orchard required to pass through a turnstile into the Ironwood pool.

For ordinary users, the most practical lesson is simple: always keep Zcash wallet software and other Zcash applications updated. Network upgrades can affect compatibility, transaction functionality and wallet behavior.

Users who have not interacted with Zcash recently should consult current official documentation before making significant transfers, particularly if they are using older wallet software.

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# How to Get Started With Zcash

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Getting started with Zcash generally involves three basic steps: obtaining ZEC through a supported method, choosing a suitable wallet and learning how to send and receive transactions.

Step 1: Learn the basics

Before acquiring ZEC, learn the difference between transparent and shielded transactions. This is more important with Zcash than simply learning how to copy and paste a wallet address.

Step 2: Choose a wallet

Select a wallet that supports the type of Zcash activity you want to perform. If privacy is your primary reason for using Zcash, prioritize wallets that support shielded transactions and clearly explain their privacy functionality.

Step 3: Obtain ZEC

ZEC may be available through cryptocurrency exchanges and other services depending on your location. Availability, supported transaction types and withdrawal options can differ between platforms.

Step 4: Test with a small transaction

A practical approach for new users is to become familiar with the wallet using a small amount before attempting a larger transfer. This gives you an opportunity to understand addresses, confirmations, fees and transaction history without introducing unnecessary complexity.

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## Choosing a Zcash Wallet

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A cryptocurrency wallet is an important part of using Zcash because it manages the keys required to control your funds.

Zcash users can encounter mobile wallets, desktop software, hardware wallets and other wallet solutions. Each option has different tradeoffs involving convenience, security, privacy functionality and user experience.

Mobile wallets

Mobile wallets are convenient for everyday payments because they can be used directly from a smartphone. They may be particularly attractive to people who want to use ZEC for regular transactions.

Desktop wallets

Desktop applications can provide additional functionality for users who prefer managing cryptocurrency from a computer. Technical users may also appreciate more advanced configuration options.

Hardware wallets

Hardware wallets are designed to keep private keys in a dedicated device. They can be useful for people holding cryptocurrency for longer periods and wanting a security-focused storage approach.

Regardless of wallet type, users should carefully protect recovery information. A wallet's security ultimately depends heavily on how the owner handles private keys and recovery credentials.

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## How to Send ZEC

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Sending ZEC generally involves opening a compatible wallet, entering the recipient information, selecting the desired transaction type and confirming the payment.

The exact process depends on the wallet being used. Some applications are designed to make shielded transactions the default, while others may present transparent and shielded options separately.

Before confirming a transaction, verify the destination information and the amount. Cryptocurrency transfers generally cannot be reversed in the same way as a conventional credit card transaction.

If you are using a new wallet or sending to a new recipient, a small test transaction can be a sensible way to confirm that everything works correctly.

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# How Zcash Can Be Used

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Zcash can be used for digital payments, transfers, holding digital value and participating in applications that support the Zcash ecosystem.

Privacy-focused payments are one of the clearest use cases. A person can use ZEC to send value without necessarily making their financial history publicly visible in the same manner as a conventional transparent blockchain transaction.

Zcash can also be relevant for international transfers. Cryptocurrency networks operate without requiring the traditional banking infrastructure used for many cross-border payments. However, actual costs, exchange availability and regulatory requirements can vary by location.

Businesses can also have reasons to investigate privacy-focused cryptocurrency payments. Publicly exposing every incoming and outgoing payment can reveal commercially sensitive information, including supplier relationships, customer payments and operating balances.

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# Why Financial Privacy Matters

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Financial privacy is sometimes misunderstood as something only people with unusual circumstances need. In reality, privacy can be useful for ordinary financial activity.

Consider a public blockchain address belonging to a small business. If customers can inspect its history, they may potentially learn information about other payments, balances or business relationships. A private payment system can reduce the amount of information exposed publicly.

Individuals can benefit for similar reasons. Your salary, savings, purchases and payments are generally considered personal financial information in traditional banking systems. A privacy-focused cryptocurrency attempts to bring some of that principle into decentralized digital payments.

Zcash's approach is therefore based on giving users more control over financial visibility.

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Zcash Network Development

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Zcash development is not controlled by one single company. The broader ecosystem includes independent organizations, developers, researchers, wallet teams and community contributors.

The Zcash Foundation operates ecosystem resources, while other groups contribute to protocol development, infrastructure and applications.

The Zcash ecosystem also includes Zebra, an independent consensus-compatible implementation of a Zcash node. Official documentation states that zcashd is being deprecated and that development is moving toward Zebra and other current infrastructure.

This transition demonstrates why users should rely on current documentation rather than old tutorials. Cryptocurrency software changes over time, and instructions written several years ago may no longer accurately describe the current network.

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Zcash Mining and Network Security

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Zcash originally used the Equihash proof-of-work algorithm. Proof-of-work systems use computational work to help secure a blockchain and determine how blocks are produced.

Mining is a technical area of cryptocurrency that requires suitable hardware, software, electricity and an understanding of operating costs.

For ordinary ZEC users, mining is not required to own or use Zcash. Users can obtain ZEC through supported markets and use compatible wallets without running mining equipment.

People considering mining should calculate hardware expenses, electricity costs, expected rewards and changing network conditions before purchasing equipment.

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Zcash Fees

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Transaction fees are another consideration when using Zcash.

Fees can vary depending on network conditions, wallet implementation and transaction characteristics. Users should check the fee displayed by their wallet before confirming a payment.

It is useful to distinguish the blockchain transaction fee from fees charged by an exchange or payment service. An exchange may charge its own withdrawal or trading fee in addition to the underlying network transaction cost.

For that reason, comparing the total cost of acquiring or transferring ZEC should include all applicable platform charges rather than looking only at the blockchain fee.
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# Zcash and Cryptocurrency Privacy

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Zcash is one of the better-known cryptocurrency projects focused specifically on financial privacy.

The broader privacy cryptocurrency category includes different technologies and design philosophies. Some networks attempt to hide transaction amounts, some focus on hiding participants, and others use different cryptographic approaches.

Zcash stands out because privacy is built into the protocol while still allowing transparent transaction functionality.

This combination gives users flexibility. Someone who needs a transparent transaction for a specific purpose can use the appropriate transparent functionality, while someone who values confidentiality can use shielded functionality when supported.

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# Practical Tips for New Zcash Users

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1. **Learn the transaction types.** Understand transparent and shielded transactions before moving funds.
2. **Use current wallet software.** Network upgrades make keeping applications updated especially important.
3. **Protect recovery information.** Never casually share seed phrases or private keys.
4. **Test small transfers.** A small transaction can help confirm that you understand the wallet and recipient process.
5. **Check addresses carefully.** Cryptocurrency transactions are generally difficult or impossible to reverse after confirmation.
6. **Understand exchange limitations.** A service may support ZEC but have different deposit, withdrawal or shielded-transaction capabilities.
7. **Read current documentation.** Avoid relying entirely on old tutorials.
8. **Separate privacy from anonymity assumptions.** Privacy technology can protect blockchain information, but users should still understand the privacy characteristics of their wallet, exchange and surrounding services.

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# What Makes Zcash Interesting in 2026?

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Zcash remains interesting because financial privacy continues to be an important issue as cryptocurrency adoption develops.

The network's 2026 upgrades also demonstrate ongoing technical development. The Ironwood NU6.3 upgrade introduced a new shielded pool and was designed to strengthen the protocol following the discovery of an Orchard-related soundness vulnerability earlier in the year.

This development highlights an important characteristic of open blockchain networks: protocol technology can change in response to newly discovered issues, research and community decisions.

For users, that means Zcash should be viewed as an evolving technology rather than a finished product that never changes.

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# Researching ZEC as a Cryptocurrency

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People researching ZEC often focus on price, but a broader analysis can be more useful.

Start by examining the actual purpose of the network. Ask whether privacy-focused digital payments solve a problem that matters to you.

Next, investigate ecosystem development. Look at wallets, applications, developer activity, network upgrades and real-world payment use.

It is also useful to understand liquidity and exchange availability in your own region. A cryptocurrency can have interesting technology while still presenting practical limitations if it is difficult to acquire, transfer or spend where you live.

Finally, understand that cryptocurrency prices can move dramatically. A technology assessment and an investment decision are two different questions.

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# Zcash Privacy Does Not Mean Ignoring Basic Security

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Privacy technology and personal security work together.

A person can use sophisticated privacy technology while still losing funds through a compromised computer, leaked recovery phrase or fraudulent website.

Good security practices remain important. Use official software sources, keep devices updated, protect wallet recovery information and verify websites before entering sensitive information.

Never share a wallet recovery phrase with another person claiming to provide technical support. Legitimate wallet support should not require you to reveal private wallet credentials.

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# Frequently Asked Questions About Zcash

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What is Zcash?

Zcash is a decentralized cryptocurrency focused on financial privacy. Its native cryptocurrency is ZEC, and the network supports both transparent and shielded transactions.

What is ZEC?

ZEC is the native digital currency of the Zcash network. It can be held, transferred and used for supported payments and applications.

Is Zcash private?

Zcash supports shielded transactions that are designed to protect financial information. However, Zcash also supports transparent transactions, so privacy depends on the transaction type and software being used.

What are shielded transactions?

Shielded transactions use Zcash's cryptographic privacy technology to protect transaction information from ordinary public blockchain visibility.

What are zero-knowledge proofs?

Zero-knowledge proofs allow information to be verified without revealing the complete underlying information. Zcash uses this cryptographic concept to support its shielded payment system.

Can Zcash be used for payments?

Yes. Zcash was designed as digital electronic cash and can be used to send ZEC to compatible wallets and services.

Does Zcash still support transparent transactions?

Yes. Zcash has both transparent and shielded transaction functionality.

What happened to Zcash in July 2026?

The Zcash NU6.3 Ironwood upgrade activated on July 28, 2026. It introduced a new shielded pool and made changes involving the previous Orchard pool.

Should I update my Zcash wallet?

Users should keep their Zcash wallets and related software updated and follow the current instructions supplied by the wallet or software developer.

Is Zcash the same as Bitcoin?

No. Zcash was developed from the Bitcoin code base but introduced different privacy technology and supports shielded transactions.

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## Final Thoughts on Zcash
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Zcash occupies a distinctive position in cryptocurrency because it focuses heavily on financial privacy while retaining the basic benefits of decentralized digital money.

The core idea is straightforward: people should have more control over who can see their financial activity. Zcash attempts to accomplish this through shielded transactions and zero-knowledge cryptography.

For newcomers, the most important concepts to understand are ZEC, transparent transactions, shielded transactions, wallets and zero-knowledge proofs. Once those concepts are clear, the rest of the ecosystem becomes considerably easier to understand.

The 2026 Ironwood NU6.3 upgrade also shows that Zcash continues to develop. The introduction of a new shielded pool and related protocol changes represent an important stage in the network's continuing evolution.

Anyone exploring Zcash should therefore approach it as both a cryptocurrency and a technology project. Learn how the network works, understand the privacy model, use current wallet software and take time to understand the transaction process before moving significant amounts.

Zcash's long-term relevance will ultimately depend on whether privacy-focused digital money continues to solve meaningful problems for individuals, businesses and developers. As digital transactions become increasingly visible and data-driven, the question of financial privacy is unlikely to disappear. Zcash offers one of the most established blockchain-based approaches to addressing that question.

**In short, Zcash is more than another cryptocurrency ticker. ZEC represents a digital asset built around a broader idea: decentralized payments can provide users with greater control over financial information, while cryptographic technology can make privacy compatible with blockchain verification.**

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Official Zcash Resources

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For the most current information, users should consult official Zcash documentation, current wallet information, network upgrade announcements and technical specifications before making important decisions.

- Zcash official website and educational resources
- Zcash technical documentation
- Zcash network upgrade information
- Zcash ecosystem and wallet resources
- Zcash protocol specifications and improvement proposals

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Published: September 17, 2026

SEO Keywords: Zcash, Zcash 2026, ZEC, Zcash coin, Zcash cryptocurrency, what is Zcash, Zcash privacy, Zcash wallet, Zcash shielded transactions, Zcash explained, Zcash zero knowledge, Zcash crypto, Zcash Ironwood, NU6.3, Zcash privacy coin, how Zcash works