

WHAT ARE THE AUDIT STEPS FOR ERC-20 TOKEN?



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ERC20 Token

ERC20 token audit involves several checklists like security, functionality and reliability of the token smart contract. I believe you guys are familiar with these things or not don't worry I can explain this detailly here. If you have any questions after completing this guide, our experts are here to help. **Book a free appointment**, and we'll assist you with your concerns.



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What are the Audit Steps for ERC-20 Token?

1. Starting the Interaction:

- Initially we need to define our scope of the audit, Consider the factors like complexity of the smart contract, Interaction level with external systems and the criticality of the token functionality.
- Fix the audit objectives, like find the security vulnerabilities, Optimize the efficiency of the smart contract,ensuring the compliance with the erc20 token standards.
- Make sure you have clear communication channels and clearly define the audit team's and the client's points of contact.
- Set realistic timelines and milestones for the audit, taking into account factors such as contract complexity, resource availability, and project constraints.



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2. Code Review:

- Check the smart contract code line by line and clearly focus on areas prone to vulnerability and security risk.
- Pay particular attention to functions responsible for token transfers, allowances, and approvals, as well as any external dependencies or interactions with other contracts.
- Ensure to check whether proper access controls have been put in place, validation checks were included and proper defined error handlers to revert a dangerous activity.
- Identify the dependencies that are more insecure and incompatible with others more external libraries and third-party components are present or not.



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3. Static Analysis:

- Utilize static analysis tools and techniques to analyze the smart contract code for potential security vulnerabilities, code smells, and anti-patterns.
- Conduct automated scans and code inspections to identify common issues such as integer overflows, reentrancy vulnerabilities, and unchecked function calls.
- Evaluate the complexity and readability of the codebase, identifying areas that may require refactoring or optimization for better maintainability and performance.



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4. Dynamic Testing:

- Finally, move the smart contracts into a testing network or a sandbox more so in order to see the actual world reactions and actions.
- Execute a series of possible, distinguishable or determinable test cases to leave no doubt to the execution of the contract which passes and fails to prove it immune to manipulation.
- Manages contracts and results of transactions that will help in deciding different changes and indications of potential problems or threats.



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5. Security Assessment:

- Make an evaluation of the security of the smart contracts with regards to the data confidentiality, integrity, and availability.
- Per evaluate the likely threats and risks that are likely to be ass>:: Determine possibilities for attack and threat showing which are likely to be more damaging to the contract and more risky for the users.
- Assess well implemented and integrated security controls, access controls, and authorization processes from the realized risks that reduce protection against unauthorized access or manipulation of contract assets.



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6. Documentation and Reporting:

- Pull together the hunting grounds, the observations made courtesy of the hunting grounds as well as the assessment tables put together in a detailed audit report aligned to an audit report template.
- Prepare clear descriptions of potential risks accompanied by recommendations on risk causes, consequences, and ways of addressing them.
- To increase the level of detail and credibility of the findings of the audit, it is suggested to submit the evidence, coding samples, diagrams, and references, as illustrated herein above.
- Ensure that the report is comprehensible for the reader; if there are some complexities inherent in the study, it's important to give enough information to satisfy a professional, but then it should also be written in a simple language for a lay reader to understand.



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7. Client Communication:

- Schedule regular meetings and checkpoints with the client to review audit progress, discuss interim findings, and address any questions or concerns.
- Foster open communication and collaboration between the audit team and the client, encouraging active participation and feedback throughout the audit process.
- Provide guidance and support to the client in interpreting audit findings, prioritizing remediation efforts, and implementing recommended security enhancements.



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8. Follow-Up and Support:

- Offer post-audit support and assistance to the client during the remediation phase, including clarification of audit findings, guidance on best practices, and assistance with code changes.
- Conduct follow-up assessments and validations to verify the effectiveness of remediation measures and ensure that identified vulnerabilities have been successfully addressed.
- Encourage ongoing monitoring and maintenance of the smart contracts to proactively identify and mitigate emerging security threats and vulnerabilities.





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THANK YOU ...