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Research of Computer Network Security and Protection Strategy

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Abstract: *With the broad notoriety of computer organize applications, its security is additionally gotten a tall degree of attention. Variables influencing the security of organize is complex, for to do a great job of network security could be an orderly work, has the tall challenge. For security and unwavering quality issues of computer arrange framework, this paper combined with practical work involvement, from the danger of arranging security, security innovation, network some Proposals and measures for the system plan rule, in arrange to create the masses of clients in computer systems to improve security mindfulness and master certain organize security innovation.*

Keywords: Network Security

I. INTRODUCTION

These days, the application of computer organize has amplified to each corner of the world and regions, is an unprecedented effect on people's work and life, as well as electric control, transportation, and has progressively become an indispensably portion of people's life. At the same time, with the growing of organize estimate, and the understanding of network information is increasingly in-depth, increasingly risky variables such as the arrange assault, has been a danger to organize and data security. Computer arrange security has gotten to be a worldwide concern. Computer network and data security innovation is the center issue of the computer and arrange frameworks for effective protection. Arrange security includes exceptionally wide extend, from a specialized level, primarily counting data encryption, personality confirmation, interruption location and interruption assurance, infection assurance and virtual private networks (VPNS), etc. These days, the application of computer organize has opened up to each corner of the world and districts, is an exceptional influence on people's work and life, as well as electric control, transportation, and has continuously gotten to be an essentially parcel of people's life. At the same time, with the developing of organize gauge, and the understanding of arrange data is progressively in-depth, progressively unsafe factors such as the organize ambush, has been a genuine threat to organize and information security. Computer organize security has gotten to be a around the world concern. Computers organize and information security development is the center issue of the computer and organize systems for viable security. Orchestrate security incorporates outstandingly wide expand, from a specialized level, fundamentally tallying information encryption, identity affirmation, intrusion area and interference affirmation, disease confirmation and virtual private systems (VPNS), etc.,

II. THE HIDDEN TROUBLE IN A TYPICAL COMPUTER NETWORK SECURITY

2.1 Routing Protocol Defects

(1) Source directing choice utilizing. Source steering within the IP header choice is utilized to the IP parcel directing, hence, an IP packet can be indicated concurring to the forecast of directing to reach at the goal have. But it too created opportunities for the invaders, when a have known in advance that there's a trusted have, you'll utilize the source routing options camouflaged as a trusted have, so as to assault framework.

(2) The produce ARP bundle. Fashion ARP bundle may be a kind of exceptionally complex innovation, includes numerous perspectives of TCP/IP and Ethernet characteristics, in this as ARP security issues isn't exceptionally suitable. Fake ARP bundle is the main handle to the IP address of the goal have and Ethernet address for an ARP parcel source address, this can cause another IP parody. In this assault basically in exchanged Ethernet, exchanged Ethernet, trade center in accepting each ARP parcel overhaul Cache. Continually send parody ARP parcel can make both bundles sent to the goal have to an interloper, so exchanged Ethernet can be observed. The ways to illuminate the over issues is will

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trade center set as inactive official. A attainable approach is when you have runs unusually (moderate arrange, IP packets presented. concurring to higher), reflect to the organize director.

2.2 Windows Operating System Security Flaw

ISAPI buffer flood Microsoft IIS (Web Data Server) is the foremost utilized Microsoft Windows NT and Windows 2000 Server computer program. At the time of introduce IIS, different ISAPI (Web Administrations Application Programming Interface) is consequently introduced. ISAPI permits designers to utilize an assortment of energetic connect library DLLs to extend the IIS server execution. A few energetic interface libraries, for case, idq.dll, a programming mistake, so they are not correct boundary check. In specific, they do not piece the long string. An aggressor can take advantage of this to the DLL to send information, result in buffer flood, and after that control the IIS server. Arrangement to the issue of the over is if it is found that framework has this kind of deformity, at that point introduce the most recent Microsoft patches. At the same time, ought to check and cancel all do not require the ISAPI expansion. Frequently check whether these expansions are re-established.

2.3 Computer Virus

Computer infections can be put away, executable and can be covered up within the executable programs and information records without being found that trigger the get to control framework after an executable program, it is infectious, inactive, triggers and destructive sexual characteristics. A computer infection is basically transmitted by replicating records, records, and run the program operation. Within the course of regular utilize, floppy disk, difficult disk, CD and organize is the most way of spreading the virus. Computer infection after running light seem decrease the framework productivity, or may harm records, erase records, even make the information misfortune, pulverization of the framework equipment, all sorts of unusual results. In later a long time, the emergence of an assortment of dangerous infections are based on the spread of the arrange, the computer arrange virus damage is exceptionally huge.

2.4 Artificial Malicious Attacks

Typically, the greatest danger to the computer organize assault. Pernicious assaults and can be partitioned into dynamic attack and inactive assault. Assault in different ways to specifically devastate the legitimacy of the data and keenness; Passive attack is in typical working conditions, does not influence the arrange to be caught, and takes, translating to obtain important private data. These two sorts of assaults can cause extraordinary hurt to computer systems, and lead to a spillage of imperative information. Presently utilize the organize computer program is exist a few deficiencies and vulnerabilities, organize programmers regularly utilize interruption into imperative implies of data framework, eavesdropping, obtain and assault into critical data around the affectability, alter, and crush the typical utilize of the information arrange, information misfortune or framework loss of motion, have noteworthy political impact and financial misfortunes to the country.

III. THE APPLICATION OF THE STRATEGY FOR NETWORK SECURITY TECHNOLOGY

Security is the security of the arrange to outlive, as it were secure and secure, organize can realize its possess esteem. The development of arrange security innovation as individuals arrange hone and improvement, it involves technical is very wide, the most strategies such as confirmation, encryption, firewall and interruption location are a vital defence of arrange security.

3.1 VPN Technology

VPN is the most recent to unravel the issue of data security, one of the foremost fruitful innovation subjects, a virtual private organize (VPN) innovation is on the public arrange to set up devoted network, make the data through the security of encryption "pipe" within the open organize. To construct on the open communication, arrange VPN there are two sorts of standard component, these two components for steering filtration innovation and tunnel technology. The current VPN primarily embraces the taking after four innovations to guarantee secure: burrow technology, encryption innovation, key administration innovation and client character verification innovation and hardware.

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3.2 Intrusion Detection Technology

Interruption Discovery innovation may be a hotspot within the investigate of the organize security, may be a kind of dynamic safety protection technology, provides the attacks of inside, outside and real-time assurance mis operation, intercept corresponding Intrusion some time recently arrange Framework compromised. In conjunction with the improvement of the time, Intrusion Detection technology will create within the course of the three: dispersed Interruption Discovery, brilliantly Intrusion Detection and comprehensive security defense arrangements. Interruption Discovery Framework (Interruption Location System, IDS for brief) may be a combination of computer program and equipment for Interruption Location, its fundamental work is to identify, in addition to recognizing portion avoid intrusion; Interruption location of forerunners, in this way handling, such as halt, closed, etc.; Intrusion of the document, giving lawful premise; Organize interruption occasions beneath danger level appraisal and recovery, and other capacities.

3.3 Data Encryption Technology

Is the reason of data encryption security organize information, records, secret word, and control data, and protect the online transmission of information. The commonly utilized strategies are interface encryption, the endpoint encryption and encryption three hubs, the reason of interface encryption is to secure the organize hub connect between data security; The end-to-end encryption is the reason of the source conclusion client to conclusion user's information assurance; Hub is the reason of encryption between the source hub and goal hub transmission interface to supply assurance.

3.4 Authentication Technology

Certification is a vital innovation to anticipate malevolent assaults, it is critical to all sorts of information system security in open environment, the most reason of the certification, there are two:

1) Confirmation information of the sender is legitimate.

2) To confirm the judgment of the data to guarantee that the data has not been tampered with within the prepare of transmission, replay or delay, etc. The pertinent certification fundamental procedures are: message authentication, character confirmation and advanced signature. Message authentication and personality confirmation has solved the communication parties fascinated by conditions to anticipate the harm of a third party and camouflage. Computerized signature can anticipate others mimic sending and accepting of data, and avoid I afterward denied that I have been sending and getting exercises.

3.5 Access Control Technology

Get to control is the most technique of network security and security, the most errand is to guarantee that are not illegal use of arrange assets and get to exceptionally much, moreover is the upkeep of arrange framework security, to secure the important means of organize assets, is one of the foremost vital center techniques of organize security. Get to control technology including network get to control, arrange get to control, security control, property security control directory, the net server security control, organize checking and locking control, organize harbour and hub security control and so on. Agreeing to the level of organize security, arrange space environment is diverse, can be flexibly set the sum and sort of get to control.

IV. DESIGN PRINCIPLE

The plan rule of arrange security assurance framework from the point of view of the organize security of network safe security framework plan and usage ought to be concurring to the taking after principles:

1. The slightest benefit guideline: any protest ought to as it had the benefit of the protest ought to total their assigned assignments, dodge introduction beneath assault, and decrease misfortunes caused by invasion.
2. The principle of defense in profundity: arrange security framework may be a multi-layer security framework, avoid become "single disappointment point" within the network.
3. The blocking point rule: the perfect organize security framework ought to be the security control points in interconnection organize, called it "choke focuses" here, it disentangles the organize security administration, simple to monitor organize communication and review.
4. Rule: the weakest interface chain of security assurance is the fundamental guideline of the quality of its weakest

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links, the arrangement is to keep the adjust of strength.

5. Disappointment to ensure state guideline: the organize security assurance framework disappointment modes ought to be "fall flat - safe" type, specifically, once the disappointment, restart the firewall or collapse will piece the inside organize security and the rest of the world.
6. The default declined to state rule: from a security point of see, the default declined to state is failure protection state.

V. CONCLUSION

The arrange data security could be a quick changing, update the field. This implies that essentially employing a certain protective measure is no ensure that the arrange data security, we must comprehensively utilize of various protection methodology, joining the focal points, coordinate with each other, so as to set up the arrange information security assurance framework. Based on numerous years organize security work hone of the creator to the common network security covered up peril has made the point-by-point elaboration, summarizes a few utilize of network security methodology, and the design of organize security protection framework expounded the essential rule, hone appears that still features a certain reference esteem. Organize security work, is still a require in everyday work point protect and will generally decrease network security covered up threat, to secure the ordinary utilize of the organize.

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