



Review of ISM (Information Storage Management) Framework for Organizations

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Abstract: *The ISM body-work calls for lively listing. active listing is a special-reason database. The listing is designed to address a huge quantity of examine and seek operations and a substantially smaller number of adjustments and updates. active directory information is hierarchical, replicated, and extensible. due to the fact it's far replicated, you do no longer need to keep dynamic records, which include corporate stock expenses or CPU performance. if your facts is device-particular, save the data inside the registry. standard examples of facts stored inside the directory consist of printer queue statistics, person contact facts, and network/computer configuration data. The lively directory database includes objects and attributes. items and attribute definitions are stored within the active directory schema. The activelisting is also a listing provider covered with windows Server. It extends the capabilities of previous windows-primarily based directory services and adds entirely new capabilities. The activec directory is cozy, distributed, partitioned, and replicated. it's miles designed to paintings well in any length set up, from a single server with some hundred objects to hundreds of servers and hundreds of thousands of objects. The active directory provides many new capabilities that make it easy to navigate and manage big amounts of records, generating time financial savings for each directors and stop customers.*

Key words: *work group, Active Directory, Domains, power shell.*

PROJECT AIM:

The goal of this mission is to research and discover the feasibility of an integrated security device. the brand new development targets to location many factors of existing IT and physical security systems into one cozy system. The proposed system will strive to utilize current technology inclusive of wi-fi networking, embedded device additives and Microsoft's energetic directory to create a package deal that once deployed within a commercial enterprise or corporation, might offer safety administration and easeability of get entry to for all components of business enterprise

I. INTRODUCTION

earlier than the awareness of centralized systems businesses had been the use of paintings group. that is a group of computers, which can be running independently within the organization, but can percentage some elements, like documents. they could paintings inside the identical bodily community or inside the other company's vicinity. they're now not controlled centrally. normally, the organization begins operations on numerous computers, which aren't interrelated. over the years, their range is developing. they've one of a kind hardware and software program configurations. each person can do all on its personal computer or administrator locks a person get entry to to put in applications on that particular pc. Sharing in the workgroup to percentage documents or printers from every other computer or server, you as an administrator or consumer need to recognize the exact name of the opposite pc and its user. Sharing on the concepts of group of users may be very tough and frequently impossible. If the consumer adjustments his laptop, sharing ought to be set once more from the scratch

II. WORKGROUP

Having best numerous computers, it's relatively clean to admin. Microsoft talks approximately the safe limit of 10 computers for the workgroup. Workgroup does no longer require set up of extra hardware (server) and software program (windows Server) and has low maintenance fees

Disadvantages of the workgroup

- Lack of important management and manage over permissions which users possess
- Any modifications want to be made on each of the machines
- No opportunity of monitoring the actions of customers
- opportunity of spreading of viruses when administrative privileges was granted at the computer
- lack of automation of strategies, e.g. remote software program installation.
- loss of users mobility - files saved on a single pc aren't to be had to others with out sharing, in case of laptop crashes - they're misplaced.

- No opportunity of blocking and tracing someone who stole the records.
- acquiring facts about different person may be very restricted, you cannot without difficulty test his or her email cope with or Smartphone quantity.

If a corporation already has dozens of computer systems in a workgroup then

Any alternate is made most effective on one laptop on the identical time - this means large administrative time and effort needed to exchange settings for a huge number of machines = better prices problems with protection, as an instance no manage over converting consumer passwords = low corporate records safety. tough get right of entry to different computer systems through the identical consumer - loss of relevant control over privileges.

III. ACTIVE DIRECTORY

The higher charges, low company statistics safety and shortage of valuable control over privileges, lively listing came into lifestyles. energetic listing is a special-motive database. lively listing data is hierarchical, replicated, and extensible. because it's miles replicated, you do not want to store dynamic data, together with corporate stock prices or CPU performance. in case your facts is system-unique, shop the information in the registry. the other element of Active directory is noted beneath.

- windows Server operating device carrier,
- the important database of items - computer systems, users, groups, logon credentials, printers, community shares (shared folders with documents),
- The database may be replicated to branches in different places the use of encrypted community connections,
- it may be used to integrate with external systems in other organizations that rely on active directory, as an example. square databases, report servers, mail servers, CRM structures, web servers,
- It integrates with change mail services and alternate online. for example you could use it to create an account on the way to be synchronized with the mail server,
- organizations gadgets for one common domain.

3.1 Active Directory domain

All Computers share the same naming space called domain. A domain can be local one, acting only inside the company-internally, with the example name company. internal and recognizable from the Internet, for example.company.com. Each computer within the same domain will have domain name in the same namespace

3.2 Active Directory domain structure

- Active Directory has a tree structure with permissions flow down from the top to the bottom of the tree
- Thanks to this structure, permissions assigned on a higher level will be applied at a lower level,
- This access is of course adjustable, you can also stop inheriting permissions,
- The domain is the inheritance border
- In the Active Directory database it can be only one domain
- In can be used multiple domains within the same forest
- Forests can connect with each other to create the trusts.

3.3 Active Directory can be used in the following ways

- Trade logon password for institution of users, Blocking off access for fired character,
- Routinely assigns a network printer for a specific institution of users, eg. income,
- Set home windows firewall settings centrally for the whole agency or each department one by one,
- Access to a shared folder on your community via mapping for a set of people, for example. pressure F: for the finance branch,
- Roaming profiles - consumer information saved at the server that follow the user irrespective of the computer,
- VPN - get admission to from out of doors the organization to document resources granted beneath the consumer call,
- Files and laptop folder redirection - preserving user information on the server. documents from the computer and documents folders can be kept on the server and related to the user's consultation robotically while he or she logs in to computer,
- Automatic set up of the software,
- The usage of energetic directory credentials in other structures primarily based on ad authentication, for instance. sq. Server, CRM programs, document structures,,
- Block get right of entry to to USB devices,
- Tracking tries of unauthorized access,
- Centralized control of the windows working machine updates,
- Variation of net Explorer, for example adding selected websites to the relied on region,

- One login - use the identical windows login to view e mail in Outlook,
- Modify get entry to to the company network computers - allowing or blocking primarily based on guidelines such. computer systems with out modern-day anti-virus updates should no longer be capable of join.

IV. BENEFITS OF MIGRATING WORKGROUP TO ACTIVE DIRECTORY DOMAIN

During making decisions about company's infrastructure decision-makers face the problem of managing users and equipment located in various locations. Users possess different knowledge about IT things, mainly adapted to their workplace environment. Software, hardware, operating systems, sometimes means nothing for them. Employees are part of departments that can work together or on the contrary - they should not be part of the team. To prevail on this diversity and to ensure an adequate level of security, Microsoft introduced Active Directory, which catalogs users data, computers, peripherals and allows for easier and automated management.

There are many companies which started their work on one or few computers, grew slowly and suddenly bloomed to be businesses with hundreds of users. On the other hand the IT environment was not changed accordingly to company needs. Computers was still the part of working group, being really just a collection of independent units. This made it difficult to manage them as a resources. In this article, I will present the differences between the working group and the Active Directory domain and the advantages of the latter solution

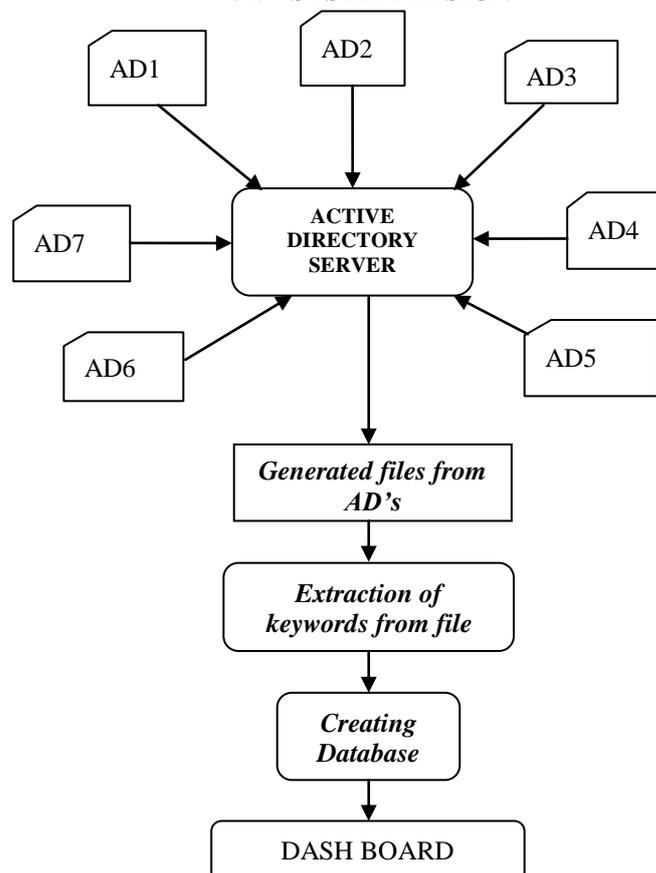
V. MIGRATION OF WORKGROUP TO ACTIVE DIRECTORY DOMAIN- GENERAL REQUIREMENTS

- installation of the server with Windows Server operating system and promote it to a domain controller
- users computers with one of the operating systems: Windows XP Professional, Windows Vista Business, Windows 7 Professional, Windows8, Windows 8.1,
- add computers to the domain,
- create domain user accounts,
- migrate user profiles from the local workgroup to the domain on all computers added to the domain.

After implementing the active directory we can get the user information through power shell scripts regarding group policies and many other policies implemented to single user in the organizations.

Further to the storage of the user information in the data base we can use pl/sql and get the direct link to the HTML. So that every user information is generated In the front end. In active directory everything is centralized and automatic. For generation of files from the active directory we use power shell scripts and make them in the batch file. Then later we can run the batch file on the time set for everyday. Similarly we can use bad file for the pl/sql to extract data from the files generated and set the time for the display in the front end.

VI. SYSTEM DESIGN



6.1 Creating bulk users Into Active Directory

We can create users into active directory through 2 ways

- Manually through active directory steps (users in min numbers)
- Through power shell scripts (bulk users)

We had a requirement of creating bulk users in Active directory for Test users. Initially we thought of writing .NET code which will communicate to LDAP and creates the users. But we were not aware of that it can be done very-2 quickly using the Power shell with 3-4 line of scripts.

6.2 Generation of files from computers added to Domain

We can generate file of users from active directory through 2 ways

- Active Directory CSV generator tool
- Through power shell scripts

The CSV Generator Tool helps you to generate a CSV file that contains a customized array of user specified attributes and the corresponding Active Directory values, all ready for any bulk Active Directory management. This free tool takes a simple CSV file with basic attributes like sAMAccountName, and generates a full -fledged CSV file containing a comprehensive attribute list. This would save considerable time and efforts of admins and other staff associated with Active Directory management. One main advantage of using this tool is that you can create a complex CSV file in a fraction of time by just supplying a simple and basic CSV as input.

The following steps will guide you through to generate a CSV file.

1. Click the "**CSV Generator Tool**" from the **Launcher** to start the tool.
2. Select the AD object type from the list.
3. Browse and select the import CSV file in the File Name field.
4. Click on GENERATE to get CSV file containing Canonical Name, Display Name and Description attributes.
5. Click on EXPORT to save the CSV file in a different location.

If you require the output CSV file with additional attributes, follow the steps given below:

1. Follow steps 1 – 3 as mentioned above.
2. Click on the ADVANCED button. This opens the Advanced Attributes dialog.
3. Select the attributes from the given list. The corresponding fields will get displayed on the left pane.
4. Select from the list on the left pane and Click on ADD to include the attributes in the generation list, shown in the right.
5. You can use the DELETE option to remove field names from the generation list.
6. Click on the FINISH button.
7. Click on the GENERATE button. This will display the object details with all specified attributes.
8. Click on EXPORT to save the CSV file in a different location.

6.3 Extraction and storage of data from the generated file

Extraction through different languages

C and C++

Asp.Net

Java

Python

Storing the extracted data through PL/SQL

The PL/SQL programming language was developed by Oracle Corporation in the late 1980s as procedural extension language for SQL and the Oracle relational database. Following are notable facts about PL/SQL.

PL/SQL is a completely portable, high-performance transaction-processing language.

PL/SQL provides a built-in interpreted and OS independent programming environment.

PL/SQL can also directly be called from the command-line SQL*Plus interface.

Direct call can also be made from external programming language calls to database.

PL/SQL's general syntax is based on that of ADA and Pascal programming language.

VII. CONCLUSION

The implementation of active directory has many benefits compared to the use of the workgroup way to the ad area, the corporation can more accurately and securely manipulate its IT environment, regulate the operational requirements, plan and make changes to a much extra pace.

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