NOT FOR SALE

Republic of the Philippines
Department of Education
National Capital Region
Division of Pasig City
STA LUCIA HIGH SCHOOL
City of Pasig

Technical-Vocational and Livelihood Track
Information and Communications Technology (ICT) Strand

Grade 12

Computer Systems Servicing NC II

QUARTER 1

LO 1: SET UP USER ACCESS

SELF- LEARNING MODULE 12 :

AD DS Forest and Schema

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COC 3 : SET UP COMPUTER SERVERS

Introductory Message

For the facilitator:

Welcome to the Technical Vocational Livelihood Education ICT Grade 12 CSS NC II Module on Set Up User Access: **AD DS Forest and Schema.**

This module was collaboratively designed, developed and reviewed by educators from Schools Division Office of Pasig City headed by its Officer-In-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin in partnership with the Local Government of Pasig through its Mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) while overcoming their personal, social, and economic constraints in schooling.

This learning material hopes to engage the learners into guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs namely: Communication, Collaboration, Creativity, Critical Thinking and Character while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:

Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Moreover, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the Technical Vocational Livelihood Education ICT Grade 12 CSS NC II Module on Set Up User Access: **AD DS Forest and Schema**

The hand is one of the most symbolized part of the human body. It is often used to depict skill, action and purpose. Through our hands we may learn, create and accomplish. Hence, the hand in this learning resource signifies that you as a learner is capable and empowered to successfully achieve the relevant competencies and skills at your own pace and time. Your academic success lies in your own hands!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning material while being an active learner.

This module has the following parts and corresponding icons:

Expectation - These are what you will be able to know after completing the lessons in the module

Pre-test - This will measure your prior knowledge and the concepts to be mastered throughout the lesson.

Recap - This section will measure what learnings and skills that you understand from the previous lesson.

Lesson- This section will discuss the topic for this module.

Activities - This is a set of activities you will perform.

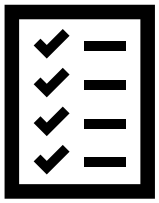
Wrap Up- This section summarizes the concepts and applications of the lessons.

Valuing-this part will check the integration of values in the learning competency.

Post-test - This will measure how much you have learned from the entire module.

E X P E C T A T I O N

After completing the lesson the learners should be able to:
A. differentiate Forest from Schema.
B. draw a sample schema of the domains.
C. cite the importance of Forest in the AD DS.

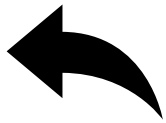


P R E – T E S T

TRUE or FALSE

Directions: Read each item carefully. Write the word **TRUE** if the statement follows the principles of schema or Forest in the Active Directory and **FALSE** if not. Write your answer on a separate sheet of paper.

_____1. The AD DS Schema is the AD DS component that defines all object types and attributes that AD DS uses to store data..
_____2. Tree is a collection of one or more forest.
_____3. The AD DS forest is a security boundary.
_____4. The Schema contains a few objects that do not exist in other domain in the forest.
_____5. Trust relationship is a logical link established between two domains.



R E C A P

TRUE or FALSE

Directions: Read each statement below carefully. Write **T** if the statement is correct and **F** if not in the space provided before each number.

_____1. An organizational unit (OU) is a container object within a domain that you can use to consolidate users, groups, computer and other objects.
_____2. In AD DS, user accounts provide a mechanism that you can use to authenticate and then authorize users to access resources on the network.
_____3. Every AD DS domain contains standard set of containers and OU that are created when you install AD DS.
_____4. You can assign GPOs to the OU and the settings apply to all objects within the OU.
_____5. Domain is the replication boundary.

L E S S O N

AD DS Forest and Schema

Introduction

In our previous discussion, we have learned about the organizational unit which is the container object within a domain that can use to consolidate users, groups, computers and other objects.

And today's lesson, we will be discussing another domains of active directory Having these domains store and secure your data. This will also explain to you how active directory is represented in an enterprise environment.

What is an AD DS Forest

Forest is a collection of one or more domain tree. A tree is a collection of one or more domains. The first domain that is created in the forest is called the forest root domain. The forest root domain contains a few objects that do not exist in other domain in the forest.

For example, the forest root domain contains two special domain controller roles, the schema master and the domain naming master.In addition, the Enterprise Admins group and the Schema Admins group exist only in the forest root domain. The Enterprise Admins group has full control over every domain within the forest.

The AD DS forest is a security boundary. This means that, by default, no users from outside the forest can access any resources inside the forest. It also means that administrators from outside the forest have no administrative access within the forest. one of the primary reasons why organizations deploy multiple forest because they need to isolate administrative permissions between different parts of the organization.

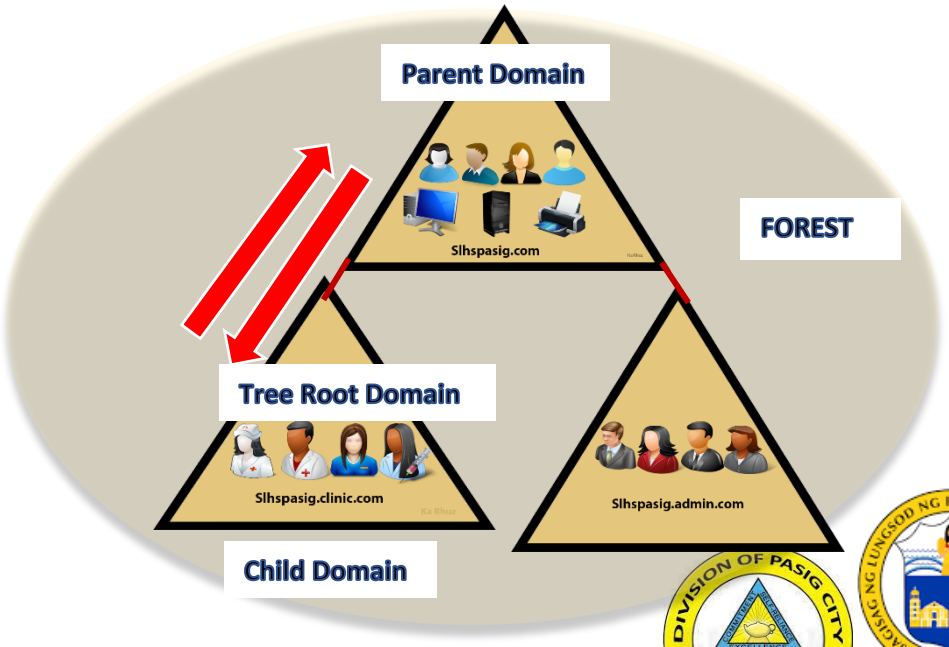


Fig. 1. Illustration of forest

What is AD DS Schema?

The AD DS Schema is the AD DS component that defines all object types and attributes that AD DS uses to store data. It is sometimes referred to as the blueprint for AD DS.

AD DS stores and retrieves information from a wide variety of applications and services. AD DS standardizes how data is stored in the AD DS directory so that it can store and replicate data from various sources. By standardizing how data is stored, AD DS can retrieve, update andf replicate data, while ensuring that the integrity of the data is maintained.

The illustration below shows the trust relationship from parents to child domain:

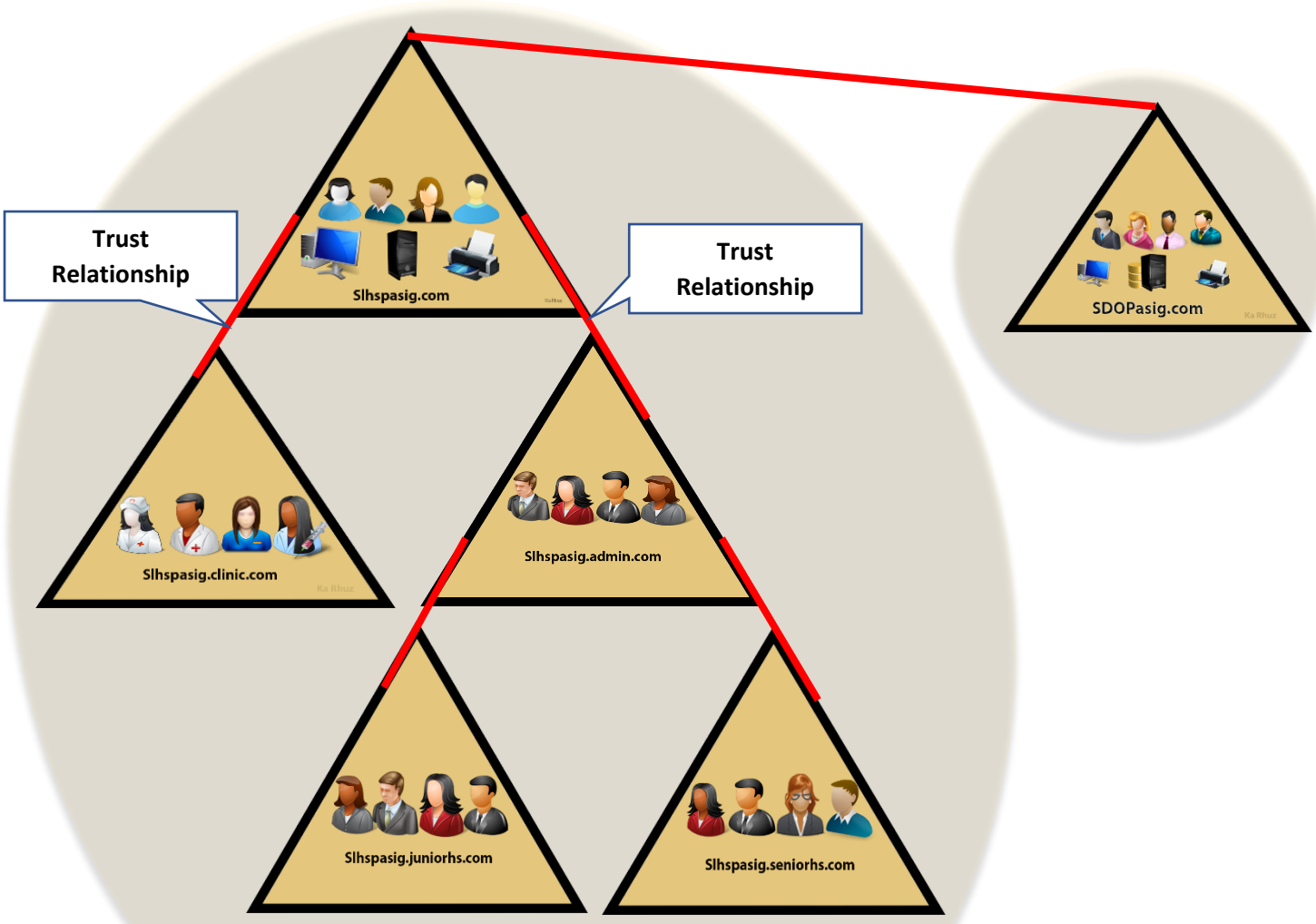


Fig. 2. Showing the schema of the six domains.

With the example above, imagine that you have a secured organization which is Slhspasig.com. who has all the secured files for all its teacher. And with the existence of Covid 19 pandemic, Slhspasig.com needs a separate group of people to work with their own domain and even hire a support staff like IT personnel. This separate department, Slhspasig.clinic.com will be added to their original domain as a Child Domain. So, Slhspasig.com is a Parent Domain. When you have two domains like these that shared

the same root namespace, in this case, Slhspasig.com, this is referred to as on the same tree. Slhspasig.com is at the top of the tree so it is considered as the root tree.

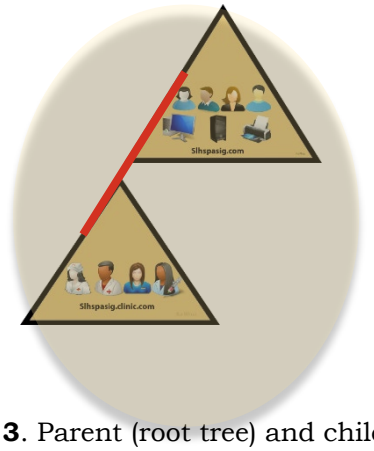


Fig. 3. Parent (root tree) and child domains showing trust relationship as represented by a red line.

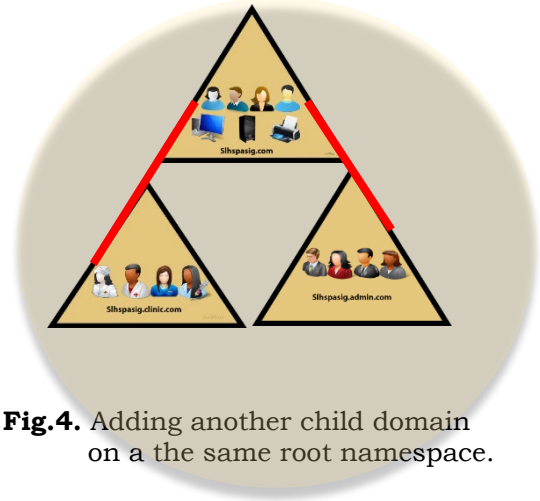


Fig.4. Adding another child domain on a the same root namespace.

To illustrate this better, you can add yet another domain for example, Slhspasig. admin.com. as shown in fig. 4. For as long as Slhspasig.admin.com shares the namespace, it is still part of the tree. Under Slhspasig.admin.com, you can still add another child domains, for example Slhspasig.juniorhs.com and Slhspasig.seniorhs.com. as shown below (fig.5):

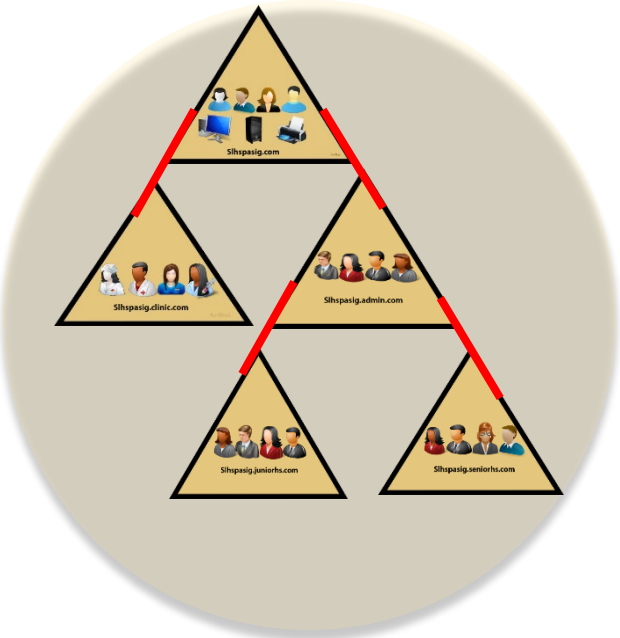


Fig.5. Adding another child domains.

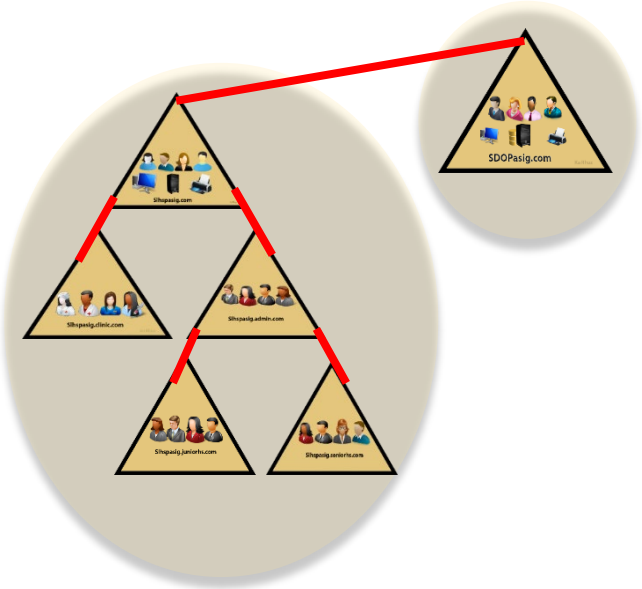
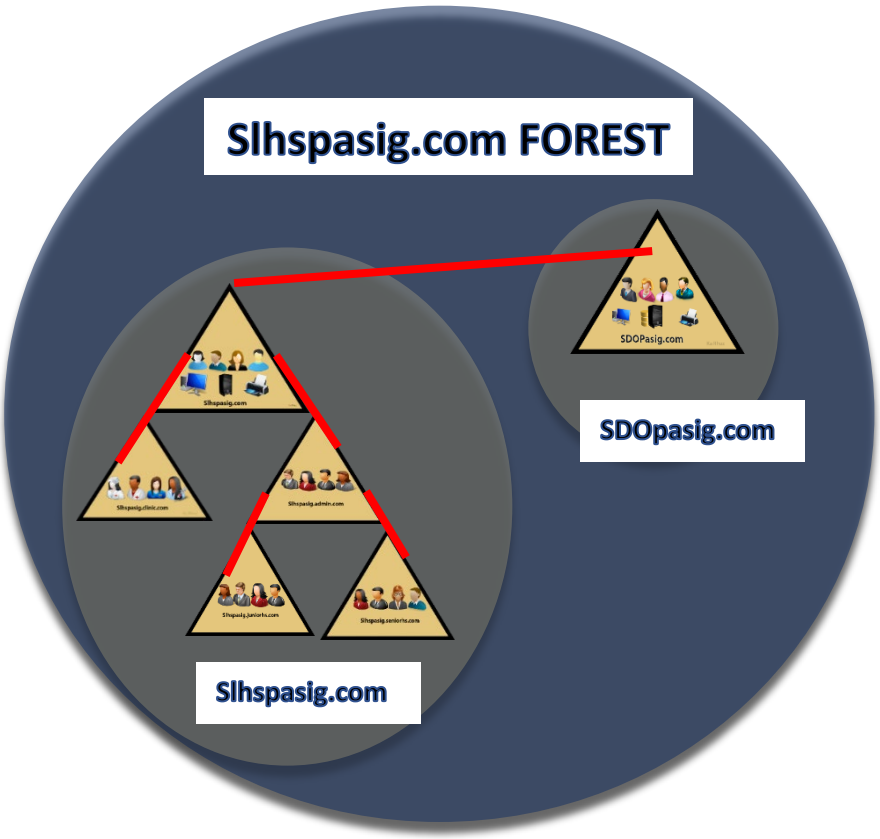


Fig. 6. Adding another domain with different namespace.

All of these domains share the Slhspasig.com namespace and thus, considered to be on the same tree in AD DS. Each domain, however has its own groups of user, computers and thus, each domain has its own active directory database. The advantage of having domains like these in the tree is that active directory will automatically create a trust relationship between the child and the parent domains (see fig.2). These trust relationships allow each member of the domain to access resources in any other domain.

as soon as they have access. Now, what would happen when you add another domain that has different namespace to the other domains? Example, if we added the new domain, SDOpasig.com. When this happens, SDOpasig.com will be part of the new tree. We have now two trees: Slhspasig.com and SDOpasig.com. So far, we have looked at the root domain and the child domain on their tree, but there is one structure that links all these together called a FOREST.

So, why is there a need to have a forest? All the domains in the forest has something in common. They share what is called the SCHEMA. As previously defines the active directory database. It defines what can be stored in the database and the structure of that data. Each domain has its own copy of the database but it is the schema that determines its design and the schema is shared between all the domains in the forest. When changes are made to the schema, these changes are replicated to every domain in the forest.



The advantage of having a forest is that all domains in the forest also has trust relationship generated automatically, between parent and child domains and between trees in the forest.

A C T I V I T I E S

Activity 1. Let DRAW IT!!

Creating a Schema

Direction: On your separate worksheet, draw a sample of a schema with the following domains:

1. Root Domain = abscbn.com
2. Child Domains:

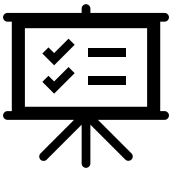
a. abscbn.security.com
b. abscbn.broadcasting.com
c. abs.cbn.entertainment.com
d. abscbn.news.com
e. gma.com

3. To show the trust relationship, make a thick line between the domains.

Rubrics:

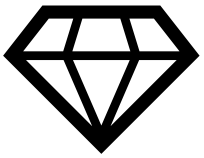
1. Design – 5 points
2. Trust relationship -2 points
3. Short explanation within and across the domains- 3 points

TOTAL = 10 points



W RA P – U P

Forest is a collection of one or more domain tree. A tree is a collection of one or more domains. The first domain that is created in the forest is called the forest root domain. The forest root domain contains a few objects that do not exist in other domain in the forest. The AD DS Schema is the AD DS component that defines all object types and attributes that AD DS uses to store data. It is sometimes referred to as the blueprint for AD DS.



V A L U I N G

What is the importance of having a forest in the AD DS?

_____

_____

_____

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_____

POST TEST

Identification

Directions: Read and understand the following statement below. Identify the following statement and write the correct term on the space provided before each item. Do this on a worksheet for this activity.

_____1. It is a collection of one or more domain tree
_____2. It is a collection of one or more domains.
_____3. It is the AD DS component that defines all object types and attributes that AD DS uses to store data.
_____4. It is a logical link established between two domains.
_____5. The first domain that is created in the forest

KEY TO CORRECTION

ACTIVITY

Let's DRAW IT! **Creating a Schema**

Let the students draw the SCHEMA using the following :
Direction: On your separate worksheet, draw a sample of a schema with the following domains:
1. Root Domain = abscbn.com
2. Child Domains:
   a. abscbn.security.com
   b. abscbn.broadcasting.com
   c. abs.cbn.entertainment.com
   d. abscbn.news.com
   e. anc.com
3. To show the trust relationship, make a thick line between the domains.

POST TEST

1. Forest
2. Tree
3. Schema
4. Trust Relationship
5. Root Domain

PRETEST :

A. TRUE
B. FALSE
C. TRUE
D. FALSE
E. TRUE

RECAP

1. T
2. T
3. T
4. T
5. T

REFERENCES

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Images:

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Cover Page was designed using Adobe Photoshop 2018 photo manipulation.
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