## INSTALAREA SI CONFIGURAREA UNUI SERVER DNS PE WINDOWS SERVER 2003

DNS (Domain Name Service) este un protocol care translateaza numele de domenii in adrese IP. De exemplu numele de domeniu **www.google.ro** poate fi translatat in 82.77.159.94 Numele de domenii sunt mai usor de retinut decat adresele IP. Pe de alta parte, Internet-ul este bazat pe adrese IP, fiecare computer avand asociat o adresa IP unica. Daca un server DNS nu stie sa translateze un nume de domeniu, cauta alt server DNS pana este returnata adresa IP exacta.

#### Instalarea unui server de DNS

Pentru instalarea unui server DNS in Windows Server 2003 dati clic pe Start -> Settings -> Control Panel -> Add/Remove Programs. Aici selectati eticheta Add/Remove Windows Components in partea stanga. O alta metoda este sa tastati comanda "appwiz.cpl" in caseta de dialog Run ce va deschide Add/Remove Programs din Control Panel si apoi selectati Add/Remove Windows Components.

in caseta de dialog "Windows Components Wizard", selectati "Networking Services" si dati clic pe butonul Details ca in figura de mai jos.

Windows Components Wizard	×
Windows Components You can add or remove components of Windows.	t
To add or remove a component, click the checkbox. A shaded box m part of the component will be installed. To see what's included in a co Details.	eans that only mponent, click
Components:	
Internet Explorer Enhanced Security Configuration	0.0 MB 🔺
🔲 🚔 Management and Monitoring Tools	6.3 MB
🗹 🚽 Networking Services	2.7 MB 💻
🔲 🚔 Other Network File and Print Services	0.0 MB
Bemote Installation Services	20мв 🔳
Description: Contains a variety of specialized, network-related service	es and protocols.
Fotal disk space required: 4.1 MB Space available on disk: 586.2 MB	Details
< <u>B</u> ack <u>N</u> ext > Canc	el Help

Selectati "Domain Name System (DNS)" ca in figura urmatoare si dati clic pe OK pentru a inchide fereastra si apoi clic pe Next pentru a instala serviciul DNS. Vi se va cere sa introduceti CD-ul cu kitul de Windows Server 2003. Dati clic pe Finish pentru a incheia instalarea.

Networking Services	×	
To add or remove a component, click the check box. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.		
Subcomponents of Networking Services:		
🗹 🖳 Domain Name System (DNS)	1.7 MB 🔼	
🗆 🔲 🚚 Dynamic Host Configuration Protocol (DHCP)	0.0 MB	
🗌 🔲 📇 Internet Authentication Service	0.0 MB	
🗆 🗔 📇 Remote Access Quarantine Service	0.1 MB	
🗆 📃 🚚 RPC over HTTP Proxy	0.0 MB	
🗆 🗔 Simple TCP/IP Services	0.0 MB	
🔲 🔲 🖳 Windows Internet Name Service (WINS)	0.9 MB 🗾	
Description: Sets up a DNS server that answers query and update names.	requests for DNS	
Total disk space required: 4.1 MB	Details	
Space available on disk: 586.4 MB	2.0.000	
OK	Cancel	

Pentru a accesa consola de management a DNS dati clic pe Start -> Programs -> Administrative Tools -> DNS, sau in caseta de dialog Run tastati comanda **dnsmgmt.msc**. Se va deschide consola de management a serverului DNS ca in figura:

🚊 dnsmgmt - [DNS]	
🚬 Eile Action View Window He	p _B×
	DNS 1 server(s)
⊡	Name
<u> </u>	
J	

## **Configurarea serverului DNS**

Pentru a incepe configurarea serverului DNS dati un clic dreapta pe numele serverului si alegeti optiunea **Configure a DNS Server...**, si va apare wizard-ul de configurare pentru serverul DNS.

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🚊 dnsmgmt - [DNS\LINUX]	
🚊 Eile Action View Window Help	_ 8 ×
LINUX	
<u>V</u> iew New <u>W</u> indow from Here	
Delete Refresh Export List	
Properties	
Help	
Set up the DNS server.	

in urmatoarea caseta de dialog selectati **"Create a forward lookup zone"** si dati clic pe Next. Aceasta zona trebuie sa fie o zona primara astfel incat sa accepte actualizari dinamice de DNS. Tot aici mai aveti optiunea de a crea un **"reverse lookup zone"** folosita in general in retele de dimensiuni mari si optiunea de a configura **"root hints"** care este fisierul ce contine adresele serverelor DNS radacina.

Configure a DNS Server Wizard
Select Configuration Action You can choose the lookup zone types that are appropriate to your network size. Advanced administrators can configure root hints.
Select the action you would like this wizard to perform:
Create a forward lookup zone (recommended for small networks) This server is authoritative for the DNS names of local resources but forwards all other queries to an ISP or other DNS servers. The wizard will configure the root hints but not create a reverse lookup zone.
Create forward and reverse lookup zones (recommended for large networks) This server can be authoritative for forward and reverse lookup zones. It can be configured to perform recursive resolution, forward queries to other DNS servers, or both. The wizard will configure the root hints.
Configure root hints only (recommended for advanced users only) The wizard will configure the root hints only. You can later configure forward and reverse lookup zones and forwarders.
< <u>B</u> ack <u>N</u> ext > Cancel Help

in urmatoarea fereastra tastati un nume dorit pentru domeniul dumneavoastra si dati clic pe **Next**. Aceasta zona specifica portiunea spatiului DNS pentru care serverul este autoritar. Numele zonei nu este numele serverului DNS. Un exemplu de zona DNS este **linux.cioby.ro**.

New Zone Wizard	X
<b>Zone Name</b> What is the name of the new zone?	
The zone name specifies the portion of the DNS namespace for which this s authoritative. It might be your organization's domain name (for example, r or a portion of the domain name (for example, newzone.microsoft.com). The not the name of the DNS server.	server is microsoft.com) he zone name is
Zone name:	
For more information about zone names, click Help.	
< <u>B</u> ack <u>N</u> ext > Cancel	Help

in urmatoarea fereastra se creeaza fisierul cu numelei zonei DNS prin adaugarea extensiei **.dns** la numele domeniului sau puteti seta calea catre un fisier existent ce contine informatii despre serverul DNS. Informatiile DNS sunt stocate in directorul system32 din Windows. Lasati numele implicit ales de sistemul de operare si dati clic pe Next.

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New Zone Wizard
Zone File You can create a new zone file or use a file copied from another DNS server.
Do you want to create a new zone file or use an existing file that you have copied from another DNS server?
Create a new file with this file name:
simongibson.com.dns
, To use this existing file, ensure that it has been copied to the folder %SystemRoot%\system32\dns on this server, and then click Next.
< <u>B</u> ack Next > Cancel Help

Apoi veti avea posibilitatea de a alege tipul de actualizare pentru zonele DNS. Prima optiune **"Allow only secure updates"** este valabila numai in cazul zonelor integrate in Active Directory. Daca nu este configurat Active Directory optiunea este dezactivata. A doua optiune **"Allow both nonsecure and secure dynamic updates"** permite actualizari de la orice client. Aceasta prezinta vulnerabilitati deoarece actualizarile pot fi acceptate de la surse care nu sunt de incredere. Ultima optiune **"Do not allow dynamic updates"** permite actualizarea manuala a inregistrarilor. Este preferata cand nu se foloseste Active Directory.

New Zone Wizard	×
<b>Dynamic Update</b> You can specify that this DNS zone accepts secure, nonsecure, or no dynamic updates.	<b>)</b>
Dynamic updates enable DNS client computers to register and dynamically update their resource records with a DNS server whenever changes occur.	
Select the type of dynamic updates you want to allow:	
C Allow only secure dynamic updates (recommended for Active Directory) This option is available only for Active Directory-integrated zones.	
<ul> <li>Allow both nonsecure and secure dynamic updates</li> <li>Dynamic updates of resource records are accepted from any client.</li> <li>This option is a significant security vulnerability because updates can be accepted from untrusted sources.</li> </ul>	
Do not allow dynamic updates Dynamic updates of resource records are not accepted by this zone. You must upda these records manually.	ate
< <u>B</u> ack <u>N</u> ext > Cancel Help	

in urmatoarea caseta de dialog putem inainta interogarile catre alte servere DNS specificate prin adrese IP. Daca nu se doreste utilizarea de **"forwarders"**, serverul va rezolva numele utilizand serverele DNS radacina. De exemplu in cazul domeniului **cioby.ro** toate cererile vor fi rezolvate de serverul DNS local, iar toate celelalte vor fi inaintate de catre serverele DNS externe.

Configure a DNS Server Wizard
Forwarders Forwarders are DNS servers to which this server sends queries that it cannot answer.
Should this DNS server forward queries?
• Yes, it should forward queries to DNS servers with the following IP addresses:
194 .168 .4 .100
194 .168 .8 .100 (optional)
O No, it should not forward queries
If this server is not configured to use forwarders, it can still resolve names using root name servers.
For more information about forwarders, click Help.
< <u>B</u> ack <u>N</u> ext > Cancel Help

Dati clic pe butonul Next si Finish pentru a incheia crearea zonei DNS. Puteti crea si o zona "**reverse lookup zone**" ce realizeaza translatarea adreselor IP in nume DNS. La selectarea optiunii New Zone... puteti alege crearea unei zone de "**reverse lookup**" ca in figura de mai jos.

Configure D	NS Server Wizard
<b>Reverse</b> A re- nam	e Lookup Zone verse lookup zone is a database that helps translate IP addresses into DNS les.
You New	can create one or more reverse lookup zones now or create them later by using the Zone wizard.
Doy	you want to create a reverse lookup zone now?
<u>د د</u>	res, create a reverse lookup zone
0.1	No, do not create a reverse lookup zone
	< Back Next > Cancel

in urmatoarea pagina tastati ID retelei pentru numele zonei. Daca aveti deja un fisier configurat puteti selecta optiunea **"Reverse lookup zone name"** si treceti numele fisierul ce contine zona de forma x.x.x.in-addr.arpa (de exemplu pentru o adresa de clasa C va fi: 0.168.192.in-addr.arpa). Dati clic pe butonul Next.

New Zone Wizard	×
<b>Reverse Lookup Zone</b> A reverse lookup zone is an address-to-name database that helps computers translate IP addresses into DNS names.	
To identify the reverse lookup zone, type the network ID or the name of the zone.  Network ID:  192 .168 .0  If you use a zero in the network ID, it will appear in the zone name. For example network ID 169 would create zone 169.in-addr.arpa, and network ID 169.0 woo create zone 0.169.in-addr.arpa.	e, uld
Reverse lookup zone name: 0.168.192.in-addr.arpa	
< Back Next >	Cancel

Dati clic pe Finish pentru a incheia configurarea zonei de "reverse lookup".

### Adaugarea unei noi inregistrari in DNS

Acum ca serverul DNS este operational, va trebui sa adaugam un hostname. Pentru realizarea acestui lucru dati un clic dreapta pe spatiul alb din consola de management DNS si selectati din meniu optiunea "New Host (A)". in caseta de dialog New Host treceti la Name numele pe care il doriti pentru host. Dedesubt se completeaza automat numele complet in DNS (in cazul nostru linux.cioby.ro). Introduceti adresa IP in campul "IP address". Daca se bifeaza optiunea "Create associated pointer (PTR) record" va fi creata o inregistrare in "reverse lookup zone" pentru host-ul linux. Campul "Time to live (TTL)" specifica durata de viata a unei inregistrari in cache-ul serverului DNS, in cazul nostru aceasta fiind de 1 ora. Dupa ce ati realizat toate setarile dati clic pe butonul Add Host.

New Host	<u>?</u> ×
Name (uses parent domain name if blank):	
linux	
Fully qualified domain name (FQDN):	
linux.cioby.ro.	
I <u>P</u> address: 192 .168 .0 .33 Create associated pointer (PTR) record	
Time to live (TTL):         0       :1       :0       (DDDDD:HH.MM.SS)         Add Host       Cancel	el

### Configurarea clientilor pentru a utiliza server-ul DNS

Pentru a configura sistemele client sa utilizeze noul server DNS trebuie sa faceti cateva schimbari in setarile lor de retea. Pentru aceasta dati clic dreapta pe iconita "My Network Places" de pe Desktop si alegeti Properties. Apoi dati clic dreapta pe "Local Area Connection" si selectati Properties. Aici selectati din lista "Internet Protocol (TCP/IP)" si dati clic pe Properties. Va fi afisata caseta de dialog de mai jos.

Internet Protocol (TCP/IP) Propertie	s ? X			
General				
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
O Obtain an IP address automatically				
○ Use the following IP address:				
IP address:	192.168.0.33			
S <u>u</u> bnet mask:	255.255.255.0			
Default gateway:	192.168.0.1			
C Obtain DNS server address auton	natically			
□ Use the following DNS server add	resses:			
Preferred DNS server:	192.168.0.33			
<u>A</u> lternate DNS server:	· · ·			
	Ad <u>v</u> anced			
	OK Cancel			

### Activarea DNS Forwarding pentru conexiunile Internet

in consola de management DNS, dati clic dreapta pe numele serverului DNS si alegeti din meniu **Properties**.

🚊 dnsmgmt - [DNS\LINUX\Forward Lookup Zones\cioby.ro]					
Eile Action View Window Help		_ 문 🗵			
	9 record(s)	Туре			
Configure a DNS Server New Zone Set Aging/Scavenging for All Zones Scavenge Stale Resource Records Update Server Data Files Clear Cache Launch nslookup All Tasks New Window from Here Delete Refresh Properties Help	arent folder) arent folder) arent folder) arent folder) arent folder) arent folder)	Start of Authority (SOA) Name Server (NS) Name Server (NS) Name Server (NS) Name Server (NS) Host (A) Host (A) Host (A) Host (A)			
Opens property sheet for the current selection.					

Dati clic pe eticheta Forwarders. Bifati optiunea Enable Forwarders. in caseta "Selected domain's forwarder IP address list" introduceti adresele IP ale server-elor DNS catre cre vreti sa inaintati cererile,in mod tipic serverul al furnizorului de servicii Internet. Puteti adauga mai multe servere. Cel mai sus din lista face prima data cererea si daca nu raspunde intr-o anumita perioada de timp, cererea va fi inaintata urmatorului server din lista.

INUX Properties			<u>?</u> ×		
Debug Loggir	g Event	Logging	Monitoring		
Interfaces	Forwarders	Advanced	Root Hints		
Forwarders are servers that can resolve DNS queries not answered by this server. Forward queries for names in the following DNS domains.					
All other DNS do	mains		New		
			· <u>re</u>		
			Remove		
below, and then Selected domain's	click Add. s forwarder I <u>P</u> addres	s list:			
81.180.172.143	<u>R</u> emove	•			
193.230.240.10	Up				
	Down				
Num <u>b</u> er of secon	Number of seconds before forward queries time out:     5       Do not use recursion for this domain     5				
	ОК	Cancel	Apply		

Dupa ce ati facut setarile dati clic pe OK.