

## دوره جامع مهندسی شبکه

پکیج جامع شروع شبکه

### مروری بر دوره

شما علاقه مندان به یادگیری شبکه می توانید تا با شرکت در دوره جامع مهندسی شبکه با تمامی مباحث کاربردی مرتبط با شبکه آشنا گردیده و آنان را فرا بگیرید. این دوره جامع به گونه ای طراحی شده است تا این امکان را برای شما فراهم سازد تا در کنار آشنایی با کلیه مباحث کاربردی شبکه اعم از ۲۰۱۶ CCNA، MCSE، Network+ امکان فراگیری اصول مربوط به چگونگی نصب و پیاده سازی سرویس های exchange server, skype for business و همچنین بکارگیری مباحث امنیت از طریق سرویس TMG و ... را نیز فرا بگیرید.

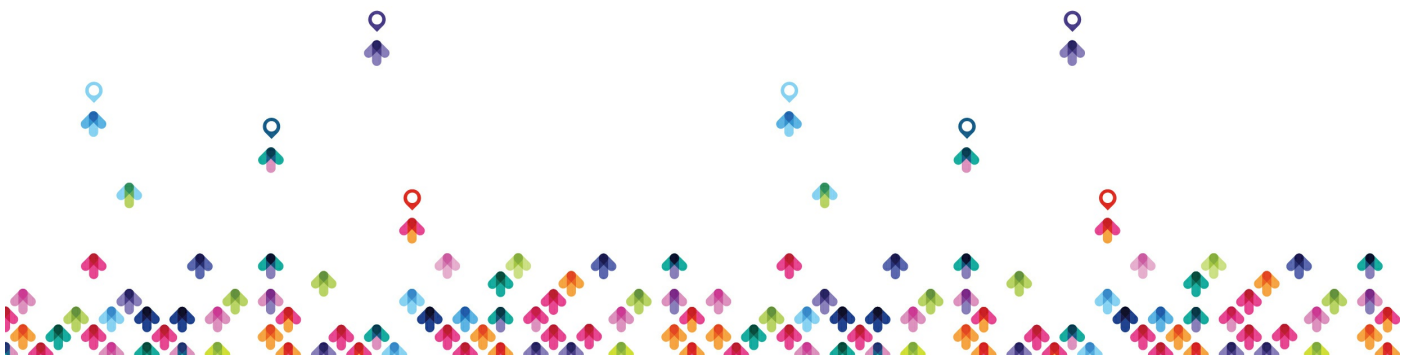
### سرفصل ها

#### Network+

- Introducing Computer Networks
- OSI Model
- Identifying Network Components
- Working with IP Addresses
- Routing Traffic
- Introducing Wide-Area Networks
- Using Command-Line Utilities
- Securing a Network

#### MCSE2016

#### windows10



- Deploying windows
- Managing Drivers and Devices
- Managing Application and Group policy
- Networking
- Remote Management
- Resource Sharing and permissions
- Disk Management
- Configure authorization and authentication
- Configure system and data recovery

## Introducing windows Server 2016 Edition

- Editions
- Hardware requirement
- Upgrade requirement

## Installation Windows Server

- pre setting (time,name,IP...)
- intro server manager
- intro roles, features

## Installation Active Directory

- deferent between domain,workgroup
- install active directory domain services
- dc promotion
- Active Directory Structure



- functional level
- Directory Service Restore Mode
- intro dns,global catalog
- intro consoles (user and computer,domain and trust,site and services)
- server functions (dc,member,standalone)
- join computer to domain
- intro console user's and computers
- Create Users and Groups

#### Additional DC

- create another domain controller in domain
- replications between domain controlles

#### Read Only Domain Controller

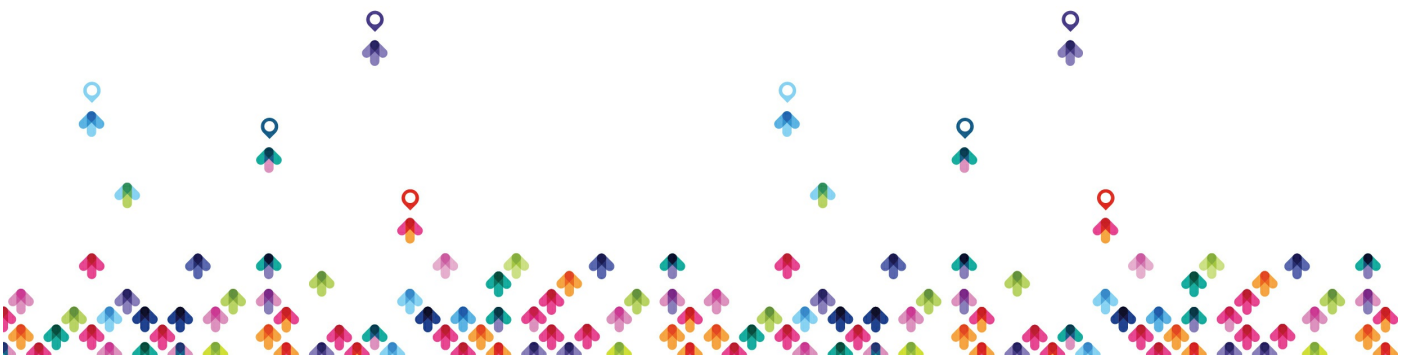
- installation RODC
- password replication
- Pre Create RODC account
- TGT
- local administrator Role
- command line tools (ntdsutil , dsadmin)

#### DNS

- installation DNS role
- different between stand alone and integrated DNS server
- DNS functions in workgroup



- forward and reverse lookup zone
- zone (primary,secondary,stub,integrated)
- dns data base
- record (A,PTR,alias,MX,SOA,SRV,NS)
- create root zone (.)
- dns delegation
- zone transfer
- forwarder
- conditional forwarder
- root hint
- dns server cache
- host cache , host file , dns tab in client computer ,auto register
- command line tools : flushdns,registerdns,displaydns,nslookup
- roundrobin
- aging,scavenging
- backup dns database
- Recursion
- DNS Global Name Zone
- DNS Security (DNSSEC)
- DNS Logging And Tuning
- DNS Cache Locking and Socket Pool
- DNS Response Rate Limiting
- DNS Policy Load Balancing
- DNS Policy Client Source Address
- DNS Policy Time-based Requests

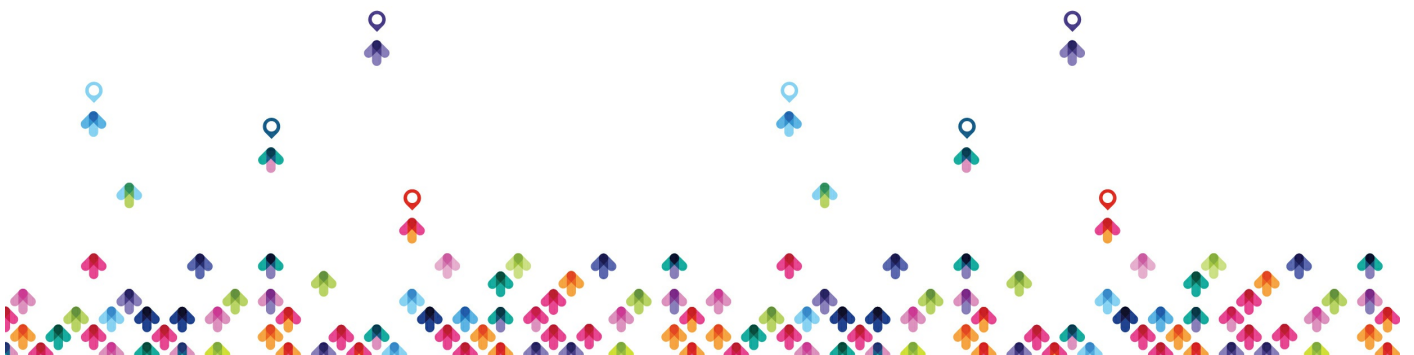


## DHCP

- installation dhcp role
- DHCP binding
- dhcpv6 stateless and statefull
- authorize in active directory
- Create scope
- adress pool
- reservation
- exclusion
- delay dhcp offer
- lease duration
- scope option, server option
- L2 Mac Filtering
- user class and vendor class
- super scope , multicast scope
- reconcile
- Dynamic Updates to DNS
- name protection
- split scope
- dhcp failover
- backup and restore
- DHCP policies

## WDS

- install windows deployment services



- add install and boot image
- multicast installation
- Create answer file
- deploying images

## File server

- install role
- DFS Namespace
- DFS Replication
- FSRM

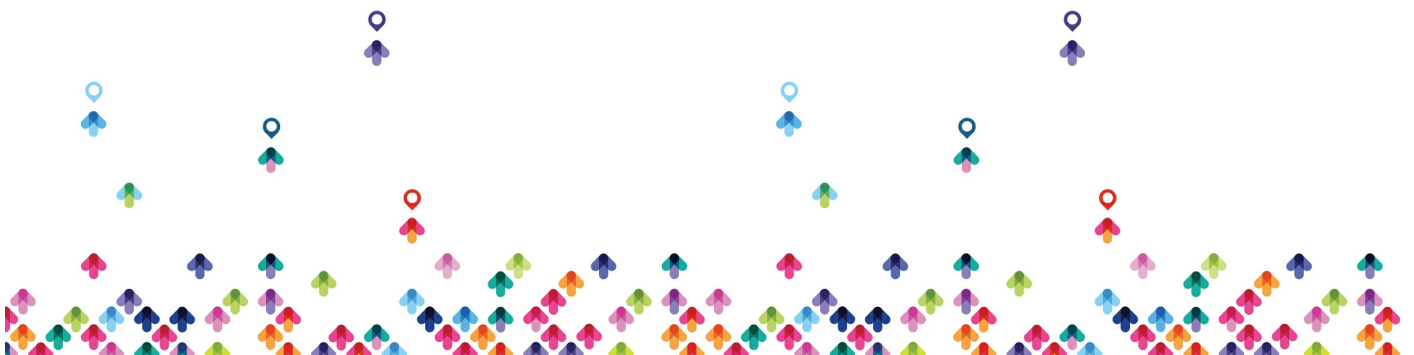
## Web server (IIS)

- install web server role
- describe role services (http features , security , management tools)
- FTP
- create site and ftp site
- register web site in dns

## NLB

- install network load balance features
- unicast and multicast type
- create cluster and add host
- combine IIS and DFS and NLB

## Domain Group Policy



- describe GPMC
- GPO
- examples in user and computer configuration
- link enable and disable
- block inheritance
- enforce policy
- security filtering
- delegation (link , edit , create GPO )
- RSAT
- hide object
- loopback policy
- turnoff local group policy
- security policy
- account policy
- local policy
- scripts
- restricted group
- file system
- backup and restore
- WMI filters
- Starter GPO
- GP modeling
- GP results

## Software Installation

- publish and assign software



- zap file

## Folder Redirection

- configure Folder redirection
- home folder

## Child Domain

- create child domain
- trust between parent and child

## Forest Trust

- create Two way forest trust

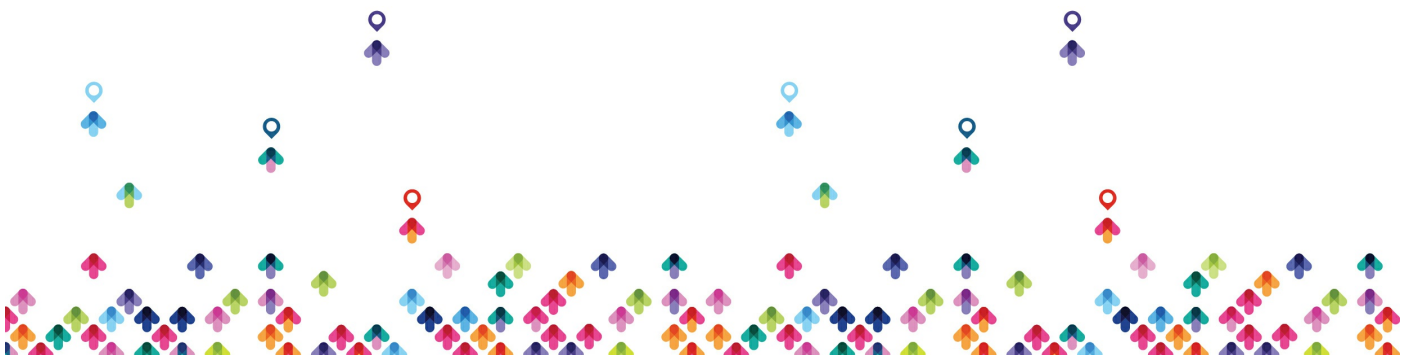
## Group's

- group Type and Scope
- group nesting
- AGUDLP

## RDS

- install remote desktop services
- Remote Desktop session hosts
- RD web access
- Remote Desktop Connection broker

## WSUS





- install Windows server Update services
- upstream and downstream
- replica and autonomus mode
- configure client update

## Routing

- Routing and addressing Function
- install RRAS roles
- static route
- static route with command line tools
- routing table
- metric
- inbound and outbound filter
- Dynamic routing protocol
- RIPv2

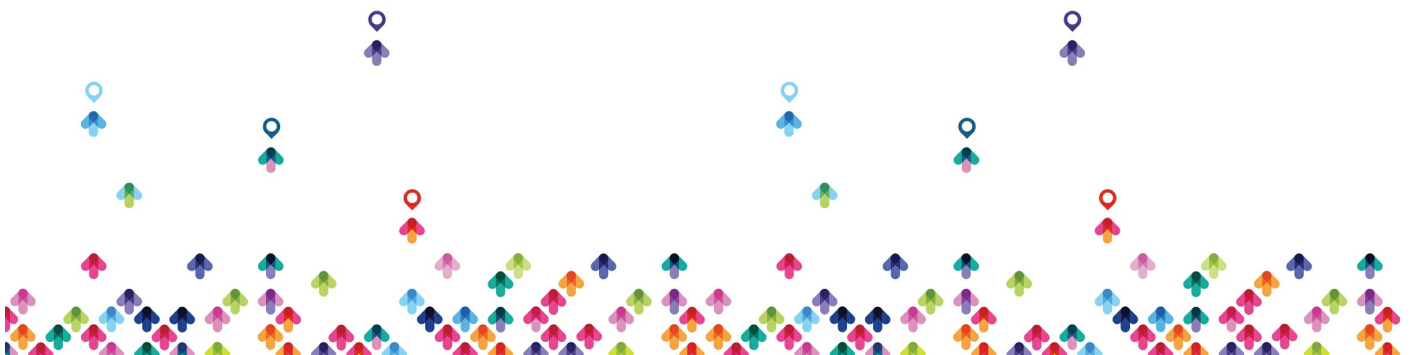
## Bridge

- explain and configure network interfaces for bridge connection

## ICS

- explain internet connection sharing
- automatically assign ip address to private network
- port forwarding in ICS

## NAT



- explain Nat function
- static, dynamic , PAT
- install Nat
- address assignment
- address pool
- reserve public address for private
- services and port (port forwarding)

## VPN

- virtual private network (remote access , site to site)
- install vpn role services
- vpn type
- vpn protocol :pptp,sstp,l2tp,ikev2
- ip address assignment
- enabling broadcast name resolution
- ipsec policy for L2TP
- authentication method
- Demand dial (vpn site to site)

## Direct Access

- Install and Configure Direct access
- Direct access vs VPN
- Troubleshooting Direct access

## Relay Agent



- explain Dhcp relay agent
- hop count and delay time

## NPS

- explain network policy server
- install network policy server role
- set policy

## Radius

- Radius Server and Radius Client
- NPS with DHCP
- NPS with VPN remote access

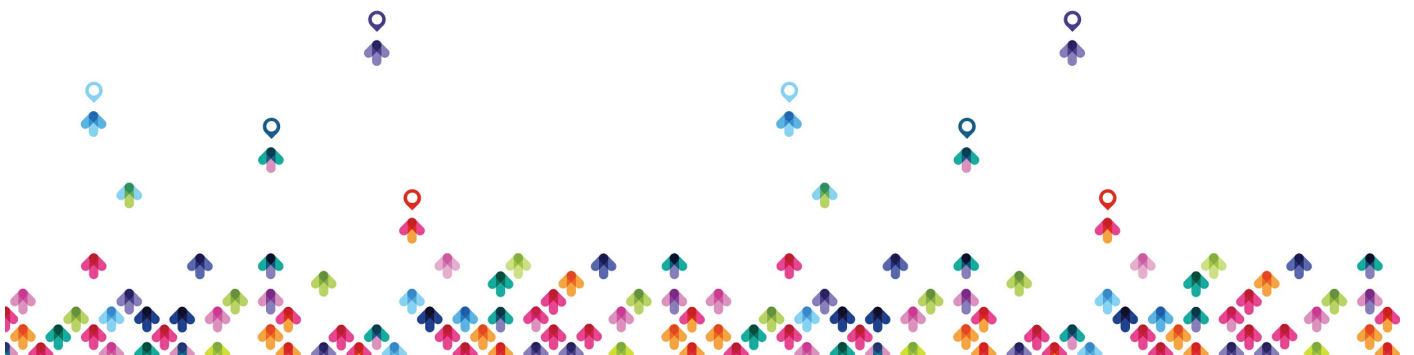
## NAP

- Network Access Protection
- health validation

## Fail Over Cluster

- explain failover clustering
- explain storage
- install iSCSI target
- create IQN
- connect iSCSI initiator with iSCSI target

## Ipssec



- explain ipsec function
- explain ESP and AH protocol
- install Ipsec in workgroup environment
- show the result in wireshark
- create ipsec in domain environment

## IPAM

- IPAM Overview and Installation
- Manage DNS using IPAM
- Manage DHCP using IPAM
- IPAM Role-based Access Control (RBAC)
- Using IPAM to Manage IP Addresses

## Active Directory Installation and Configuration overview active directory

- NTDS.DIT
- intro Powershell
- install active directory from Powershell
- install from media (IFM)
- removing Active Directory (Demote)
- removing active directory from powershell
- Active directory administrative center
- Active directory administrative center power shell history
- Active directory recycle bin
- ADSI Edit ( SID )
- Backup and Restore of Active Directory
- Install and Configure Active Directory Rights Management Services



- Active Directory Snapshot and defrag
- Install Role on VHD

## User Account Management

- Automate the Creation of Active Directory Accounts
- csvde , lifde
- Create, Copy, Configure, and Delete Groups and OUs
- user properties
- user template
- reset password
- enable/disable /rename/copy user account

## Computer Account Management

- computer account
- prestaging computer account
- secure channel
- reset computer account
- Offline Join

## Trust

- overview of trust relationship
- trusted/trusting
- incoming/outgoing
- oneway/twoway
- transitive,non transitive



- type of trust :forest,parent-child,external,shorcut,tree,realm
- sid filtering
- selective athentication
- UPN Suffix

## Site and Services

- replication partition
- intra site / inter site
- srv records
- KCC/ISTG
- bridgehead
- site link / site link brigde
- RPC / IP
- Global catalog
- command lines tools (repadmin,...)

## Master Roles

- FSMO functions
- describe roles
- rid pool
- Conflict infrustructure master role with Global catalog
- command lines tools(netdom,dsquery,...)

## Certificate Services

- CA Management



- Manage Certificates
- standalone CA vs enterprise CA
- Root CA vs Subordinate CA
- web enrollment
- autoenrollment

## Hyper-V

- Install Hyper-V
- Configure and Manage Hyper-V
- Create Virtual Machines

## Server Core

- Install and Configure Windows Server Core
- Manage Windows Server Core.

## NANO Server

- introduction to Nano Server
- Install Nano Server
- Manage and Configure Nano Server

## Switching

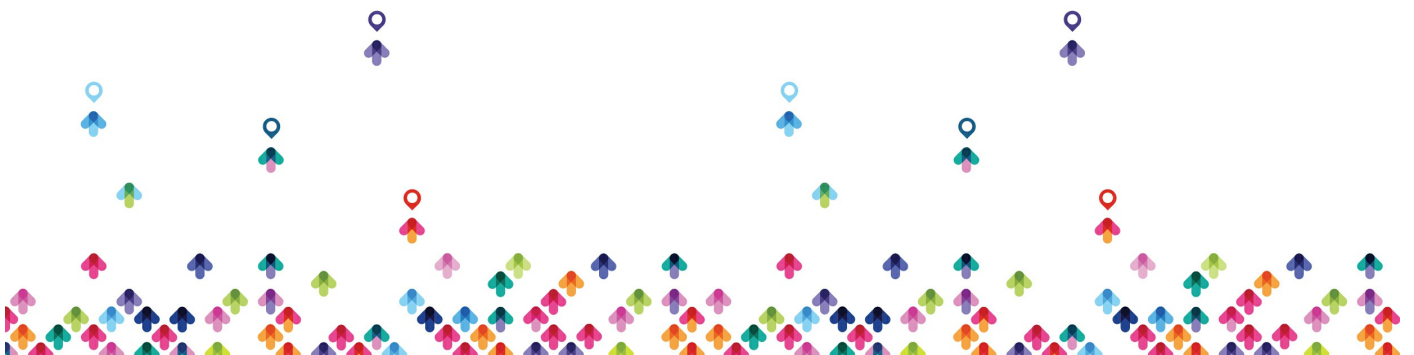
- basic commands
- secure console port



- secure ios modes
- telnet
- ssh
- tftp
- dual boot ios
- port security
- etherchannel
- vlan
- vtp
- dtp
- stp
- password recovery

## Routing

- routing concept
- static route
- routing protocols
- RIP
- OSPF
- EIGRP
- multilayer switch
- intervlan routing
- ip helper
- nat
- port forwarding
- access- list





- tunnel
  
- What Is Skype for Business
- What's New in Skype for Business
- install and configure Skype for Business server
- Skype for Business Server 2015 Server Roles
- Network Requirements
- Firewall and Security Requirements
- Administration and Management
  
- Install, configure, and manage the mailbox role
- Plan, install, configure, and manage client access
- Plan, install, configure, and manage transport
- Design and manage an Exchange infrastructure

## مخاطبان دوره

کلیه افراد علاقه مند به شروع حرفه شبکه

## پیش نیازها

این دوره پیش نیازی ندارد

