

**STUDENT ACTIVITY 2.2\_KEY: UNDERSTANDING ROUTERS**

MTA Course: 98-366 Networking Hardware

Topic: Understand routers

File name: NetFund\_SA\_2.2\_Key

**Lesson Objective**

**2.2:** Understand routers. *This objective may include but is not limited to:* transmission speed considerations, directly connected routes, static routing, dynamic routing (routing protocols), default routes; routing table and how it selects best routes; routing table memory, NAT, software routing in Windows Server®.

**Resources, software, and additional files needed for this lesson**

- None

**Directions to the student**

Match the terms/phrases to their description by placing the number of the definition on the line to the left of the term.

**Content:**

- \_\_\_ 1 \_\_\_ Router
- \_\_\_ 2 \_\_\_ Transmission speed considerations
- \_\_\_ 4 \_\_\_ Static routing
- \_\_\_ 3 \_\_\_ Directly connected routes
- \_\_\_ 9 \_\_\_ NAT
- \_\_\_ 8 \_\_\_ Routing table memory
- \_\_\_ 10 \_\_\_ Software routing in Windows® Server
- \_\_\_ 5 \_\_\_ Default routes
- \_\_\_ 6 \_\_\_ Dynamic routing (routing protocols)
- \_\_\_ 7 \_\_\_ Routing table and how it selects best routes

1. A device that selectively interchanges packets of data in two or more computer networks while connecting the networks.
2. Data can be transmitted from place to place at a measured kilobits transmission speed called the bandwidth.
3. Are considered to be the static routes that point to an interface by the routing table.
4. Routes are configured at startup and don't change unless a user changes them. It is not a protocol.
5. The network route used by a router when no other known route exists for a given IP packet's destination address.
6. Software applications that dynamically discover network destinations and how to get to them are dynamic routing protocols.
7. Routing information base (RIB) is an electronic table (*file*) or database type object that is stored in a networked computer or a router.
8. The table is an in-memory database file managed by the router's built-in hardware and software.
9. The network address translation is the process of modifying network address information in datagram (IP) packet headers while in transit across a traffic routing device.
10. RRAS is an open platform for routing and networking and a software router. It uses a virtual private network (VPN) or dial-up connections in Windows Server and supports remote user or site-to-site connectivity.