

BSIT4A - NETWORKING 3 END TERM EXAM

USE THE ATTACHED PKT FILE TO PERFORM THE EXAM INSTRUCTIONS.

FOLLOW THE INSTRUCTIONS PER PART OF THE EXAM.

TAKE A SCREENSHOT OF THE RESULT OF EVERY TESTING PROCEDURES OF EVERY PARTS OF THE EXAM (PART 1 - 4). FIT TO FULL SCREEN ALL THE RESULTS OF EACH TESTING PROCEDURES PER PART OF THE EXAM.

PART 1. IP ADDRESSING

USING THE TABLE BELOW, CONFIGURE PROPER IP ADDRESSING ON TO THE DEVICES' APPROPRIATE INTERFACES.

ISSUE "NO SHUTDOWN" COMMAND ON ROUTER INTERFACE'S CONFIGURATION AFTER ASSIGNING IP ADDRESSES

PRIVATE IP ADDRESS TABLE

DEVICE AND INTERFACE	NETWORK ADDRESS	FIRST USABLE IP ADDRESS	LAST USABLE IP ADDRESS	BROADCAST ADDRESS	SUBNET MASK	NOTES
CEU 3RD FLOOR, GIG2/0	172.16.10.0	172.16.10.1	172.16.10.30	172.16.10.31	255.255.255.224	USE LAST USABLE IP ADDRESS
CEU 3RD FLOOR,, GIG3/0	172.16.10.32	172.16.10.33	172.16.10.62	172.16.10.63	255.255.255.224	USE LAST USABLE IP ADDRESS
CEU 1ST FLOOR, GIG0/0	172.16.10.64	172.16.10.65	172.16.10.94	172.16.10.95	255.255.255.224	USE LAST USABLE IP ADDRESS
CEU 1ST FLOOR, GIG2/0	172.16.10.96	172.16.10.97	172.16.10.126	172.16.10.127	255.255.255.224	USE LAST USABLE IP ADDRESS
CEU 1ST FLOOR, GIG1/0 TO CEU 3RD FLOOR, GIG1/0	172.16.10.128	172.16.10.129	172.16.10.130	172.16.10.131	255.255.255.252	USE FIRST USABLE IP ADDRESS ON CEU 3RD FLOOR ROUTER SIDE. USE SECOND USABLE IP ADDRESS ON CEU 1ST FLOOR ROUTER SIDE

PUBLIC IP ADDRESS TABLE

DEVICE AND INTERFACE	NETWORK ADDRESS	FIRST USABLE IP ADDRESS	LAST USABLE IP ADDRESS	BROADCAST ADDRESS	SUBNET MASK	NOTES
ISP, GIG0/0 TO CEU 3RD FLOOR, GIG0/0	203.102.98.0	203.102.98.1	203.102.98.62	203.102.98.63	255.255.255.224	USE FIRST USABLE IP ADDRESS ON ISP ROUTER SIDE. USE SECOND USABLE IP ADDRESS ON CEU 3RD FLOOR ROUTER SIDE
ISP. GIG1/0	203.102.98.64	172.16.10.65	172.16.10.78	172.16.10.79	255.255.255.224	USE LAST USABLE IP

						ADDRESS
ISP, GIG2/0	203.102.98.80	172.16.10.65	172.16.10.94	172.16.10.95	255.255.255.224	USE LAST USABLE IP ADDRESS

FOR PC AND SERVERS, ASSIGN USABLE IP ADDRESS STARTING FROM THE 5TH
USABLE IP ADDRESS FROM ITS CORRESPONDING SUBNET.

TESTING PROCEDURES:

PCs AND SERVERS MUST BE ABLE TO PING OTHER DEVICES WITHIN THE NETWORK
AND ON OTHER DIRECTLY CONNECTED NETWORKS OF THE ROUTER

PART 2: OSPF

CONFIGURE OSPF TO ALL ROUTERS. ALL ROUTERS SHOULD BE OSPF-CONFIGURED
WITH AREA 0.

TESTING PROCEDURES:

PCs TO SERVER MUST HAVE PING REPLY

PART 3: NAT

DYNAMIC NAT: CONFIGURE 2 DIFFERENT DYNAMIC NAT ON CEU 3RD FLOOR ROUTER
FOR CEU 3RD FLOOR ROUTER INTERFACES GIG2/0 AND GIG3/0. USE THE DETAILS
BELOW:

FOR CEU 3RD FLOOR, GIG2/0

ACL LIST 1 PERMIT (NETWORK ADDRESS AND WILDCARD MASK)

IP NAT POOL (FIRST 30 REMAINING IP ADDRESSES)

FOR CEU 3RD FLOOR, GIG3/0

ACL LIST 2 PERMIT (NETWORK ADDRESS AND WILDCARD MASK)

IP NAT POOL (LAST 30 REMAINING IP ADDRESSES)

PAT: CONFIGURE 2 DIFFERENT PAT ON CEU 3RD FLOOR ROUTER FOR CEU 1ST FLOOR
ROUTER INTERFACES GIG0/0 AND GIG2/0. USE THE DETAILS BELOW:

FOR CEU 3RD FLOOR, GIG0/0

ACL LIST 3 PERMIT (NETWORK ADDRESS AND WILDCARD MASK)

ISSUE THE PROPER COMMAND FOR PAT CONFIGURATION

FOR CEU 3RD FLOOR, GIG2/0

ACL LIST 4 PERMIT (NETWORK ADDRESS AND WILDCARD MASK)

ISSUE THE PROPER COMMAND FOR PAT CONFIGURATION

TESTING PROCEDURES:

PING ALL PCs TO SERVER AND CHECK NAT TRANSLATIONS USING THE COMMAND "SHOW IP NAT TRANSLATION" ON CEU 3RD FLOOR ROUTER

PART 4: ACL

CONFIGURE PROPER AND APPROPRIATE ACCESS CONTROL LIST ON ROUTERS.

*BE MINDFUL OF THE IMPLICIT DENY

*APPLY ACL CONFIGURATION NEAREST TO THE SOURCE. DETERMINE THE ACL DIRECTION IF INSIDE OR OUTSIDE BEFORE ACL CONFIGURATION.

RULES:

1. DESTINATIONS

a. CEU ICT WEBSITE SERVER

- i. CAN ACCESS ONLY THE WEBSITE BY CEU 3RD FLOOR ROUTER NETWORKS ON GIG 2/0 AND GIG3/0
- ii. CAN PING ONLY THE SERVER BY CEU 1ST FLOOR ROUTER NETWORKS ON GIG0/0 AND GIG2/0

b. BSIT4A WEBSITE

- i. CAN ACCESS ONLY THE WEBSITE BY CEU 1ST FLOOR ROUTER NETWORKS ON GIG 0/0 AND GIG2/0
- ii. CAN PING ONLY THE SERVER BY CEU 3RD FLOOR ROUTER NETWORKS ON GIG 2/0 AND GIG3/0

TESTING PROCEDURES: PING THE SERVER AND ACCESS THE WEBSITE OF SERVER USING THE SERVER'S IP ADDRESS ON EACH LANs OF CEU 3RD FLOOR AND CEU 1ST FLOOR ROUTERS. ACL RULES SHOULD TAKE EFFECT.

END OF EXAM.

SUBMISSION INSTRUCTION

1. SAVE YOUR PACKET TRACER FILE USING THE FILE NAME FORMAT:
"(LAST NAME)_NET4_ET EXAM.PKT"
2. SAVE EACH SCREENSHOT OF EVERY TESTING PROCEDURES WITH A IMAGE NAME "(PART NUMBER)_TPRSS". EXAMPLES >> PART 2_TPRSS.PNG OR JPG
3. CREATE A GOOGLE DRIVE FOLDER NAMED "(LAST NAME)_ENDTERM EXAM"
4. UPLOAD INSIDE YOUR PKT FILE AND SCREENSHOTS

5. SEND THE GOOGLE DRIVE FOLDER LINK TO MY EMAIL ADDRESS:
jihibo@ceu.edu.ph

Deadline of exam in until December 3, 2024 8pm only.

Thank you and goodluck