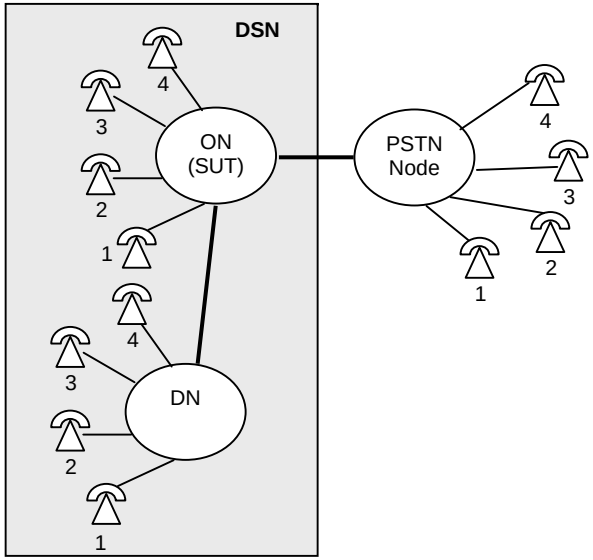
APPENDIX E

CONFIGURATIONS AND DETAILED TEST PROCEDURES

E-6 NETWORK GATEWAYS. E-6 outlines the detailed test procedures for the Public Switched Telephone Network (PSTN), Tactical, and Defense Red Switch Network (DRSN) network gateways. Though currently connected to the Defense Switched Network (DSN), the Enhanced Mobile Satellite System (EMSS) and North Atlantic Treaty Organization (NATO) Gateway Communication Switch (NGCS) do not have Chairman Joint Chiefs of Staff (CJCS) approved requirements.

E-6.1 PSTN Gateway. Table E-6.1 outlines the detailed test procedures for testing the SUT to PSTN interface. Objectives, criterion and data required for the PSTM Gateway are contained in appendix D-6.1.

Table E-6.1. PSTN Gateway Test Procedures

<table>
<tr><th>Ref #</th><th>Configuration and/or Diagram</th><th>Test Procedure(s)</th><th>Expected Result(s)</th></tr>
<tr><td>A</td><td>
Positive ID Control, on-netting, and off-netting
Requirement: MFS, EOS, & SMEO | Reference: CJCSI 6215.01B
Configure ON and DN each with 4 instruments (analog. ISDN, digital and VoIP). Configure PSTN node (PN) with 4 analog instruments. Configure the SUT such that calls require PIN for automatic interconnection. Configure PSTN node with North American Dialing Plan.


</td><td>
1. Place call from ON to PN
Hang up.

2. Place call from DN to PN (Off-netting).
Hang up.

3. Place call from PN to DN (On-netting).
Hang up.

4. Place call from DN to PN using PIN (Off-netting).
Hang up
</td><td>
1. Calls complete.
<table>
<tr><th>ON to PN</th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr>
<tr><td>Analog to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>ISDN to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Digital to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>VoIP to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
</table>
2. Calls fail; announcement played.
<table>
<tr><th>DN to PN</th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr>
<tr><td>Analog to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>ISDN to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Digital to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>VoIP to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
</table>
3. Calls fail; announcement played.
<table>
<tr><th>PN to DN</th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr>
<tr><td>Analog to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Analog to ISDN</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Analog to Digital</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Analog to VoIP</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
</table>
4. Calls complete.
<table>
<tr><th>DN to PN</th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr>
<tr><td>Analog to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>ISDN to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Digital to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>VoIP to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
</table>
</td></tr>
</table>

Table E-6.1. PSTN Gateway Test Procedures (continued)

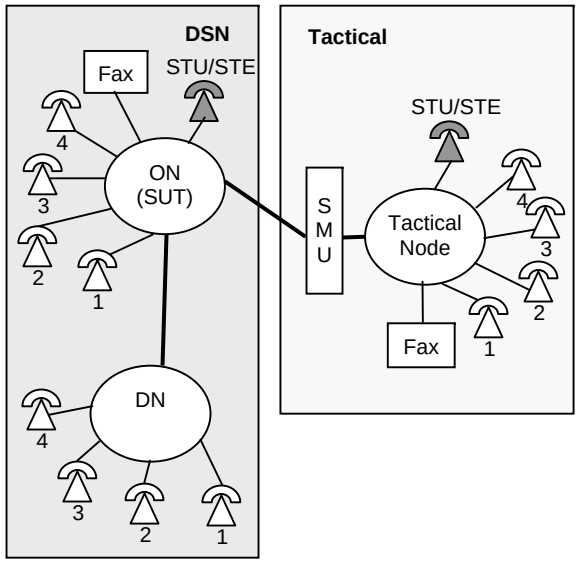
<table>
<tr><th>Ref #</th><th>Configuration and/or Diagram</th><th>Test Procedure(s)</th><th>Expected Result(s)</th></tr>
<tr><td>A
c
o
n
t
i
n
u
e
d</td><td>Positive ID Control, on-netting, and off-netting (continued)</td><td>5. Place call from PN to DN using PIN (On-netting).
Hang up</td><td>5. Calls complete.
<table><tr><th>PN to DN</th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr><tr><td>Analog to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Analog to ISDN</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Analog to Digital</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Analog to VoIP</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr></table></td></tr>
<tr><td></td><td></td><td>Notes:</td><td></td></tr>
<tr><td>B</td><td>MLPP Interaction
Requirement: MFS, EOS, & SMEO | Reference:
Same as TP 1.</td><td>1. Place call from ON1-4 to PN1-4.
2. Place PRIORITY call from DN1 to ON4.
3. Place IMMEDIATE call from DN2 to ON3.
4. Place FLASH call fro DN3 to ON2.
5. Place FLASH OVERRIDE call from DN4 to ON1.</td><td>1. Call completes.
<table><tr><th>ON -PN</th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr><tr><td>Analog to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>ISDN to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Digital to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>VoIP to analog</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr></table>2.
<table><tr><th></th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr><tr><td>ON4 & PN4 rec PNT</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Call completes</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr></table>3.
<table><tr><th></th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr><tr><td>ON3 & PN3 rec PNT</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Call completes</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr></table>4.
<table><tr><th></th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr><tr><td>ON2 & PN2 rec PNT</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Call completes</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr></table>5.
<table><tr><th></th><th>T1 CAS</th><th>E1 CAS</th><th>T1 PRI</th><th>E1 PRI</th></tr><tr><td>ON1 & PN1 rec PNT</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr><tr><td>Call completes</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr></table></td></tr>
<tr><td></td><td></td><td>Notes:</td><td></td></tr>
</table>

Legend:

CAS – **Channel Associated Signaling**
CJCSI – **Chairman Joint Chiefs of Staff**
DN – **Destination Node**
EOS – **End Office Switch**
ID – Identification
ISDN – **Integrated Services Digital Network**
MFS – **Multifunction Switch**
ON – **Origination Node**
PIN – **Personal Identification Number**
PN – **PSTN Node**
PNT – **Preempt Notification Tone**
PRI – **Primary Rate Interface**
PSTN – **Public Switched Telephone Network**
Rec. – **Receive(s)**
SMEO – **Small End Office**
SUT – **System Under Test**
TP – **Test Procedure**
VoIP – **Voice over Internet Protocol**

E-6.2 Tactical Gateway. Table E-6.2 outlines the detailed test procedures for testing the SUT to tactical interface. Objectives, criterion, and data required for the Tactical Gateway are contained in appendix D-6.2.

Table E-6.2. Tactical Gateway Test Procedures

<table>
<tr><th>Ref #</th><th>Configuration and/or Diagram</th><th>Test Procedure(s)</th><th>Expected Result(s)</th></tr>
<tr><td>A</td><td>
Trunking - Trunk Groups
<table>
<tr><td>Requirement:
MFS, EOS, & SMEO</td><td>Reference:
CJCSI 6215.01B</td></tr>
</table>
Configure the Tactical switch at 32 Kbps. Four instruments are required on the SUT (ON1-ON4). Four analog instruments are required on the Tactical Node (TN-TN4). One facsimile instrument is required on the SUT (ONF) and one on Tactical Node (TNF). One Secure Telephone Unit III is required on the SUT (ONS) and one on the Tactical Node (TNS).


</td><td>
1. Busy-out one trunk on the T1 from the ON maintenance terminal.
2. Monitor the status from the ON maintenance terminal.

3. Restore to service (idle) the trunk.

4. Repeat with 4,16, & 24 trunks busied/idled.

5. Repeat for other supported link types.
</td><td>
1. Trunk busied out. Y/N

2. ON Maintenance Terminal acknowledges the remote busy-out. Y/N
TN recognized busy out. Y/N
3. Trunk restored. Y/N
The TN acknowledges the idle applied. Y/N
4.
<table>
<tr><th></th><th>T1 CAS</th><th>E1 CAS</th><th></th><th></th></tr>
<tr><td>4 trunks</td><td>Y/N</td><td>Y/N</td><td></td><td></td></tr>
<tr><td>16 trunks</td><td>Y/N</td><td>Y/N</td><td></td><td></td></tr>
<tr><td>24 trunks</td><td>Y/N</td><td>Y/N</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td></td><td colspan="3">Notes:</td></tr>
</table>

Table E-6.2. Tactical Network Gateway Test Procedures (continued)

Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
B	**Trunking – Alarms** **Requirement:** MFS, EOS, & SMEO **Reference:**	1. Break the receive path between ON and TN. 2. Reconnect the receive path between ON and TN.	1. ON enter a Local/ Red Alarm state within 2.5 ± 0.5 seconds of loss of frame. Y/N Time measured: _____ ON sends remote/yellow Alarm. Y/N TN enters a Remote/ Yellow Alarm state. Y/N TN removes trunks from service 35-1000 msec after reception of Remote/Yellow. Y/N Time measured: _____ 2. Return link to service within 15 + 5 Seconds. Y/N Time measured: _____ DN removes Remote/ Yellow Alarm state within 20-1000 msec after return to service. Y/N Time measured: _____
		Notes:	
C	**Voice - MOS** **Requirement:** MFS, EOS, & SMEO **Reference:** CJCSI 6215.01B Same as TP 1	MOS: 1. Place a ROUTINE call from ON1 to TN1, exchange conversation, and go on hook. Repeat 10 times. 2. Place a ROUTINE call from TN1 to ON1, exchange conversation, and go on hook. Repeat 10 times.	MOS: 1. All calls complete. Y/N All calls have MOS >4.0. Y/N 2. All calls complete. Y/N All calls have MOS >4.0. Y/N
		Notes:	
D	**Voice – MLPP** **Requirement:** MFS, EOS, & SMEO **Reference:** Same as TP 1 Place all except two channels on the link under test out of service	Preempt for reuse (answered): 1. Place a ROUTINE call from ON1 to TN1. 2. Place a ROUTINE call from ON2 to TN2. 3. Place a PRIORITY call from ON3 to TN3. 4. Place all instruments on hook. 5. Place a ROUTINE call from ON1 to TN1. 6. Place a PRIORITY call from ON2 to TN2. 7. Place an IMMEDIATE call from ON3 to TN3. 8. Place all instruments on hook. 9. Place a PRIORITY call from ON1 to TN1.	Preempt for reuse (answered): 1. Call completes. Y/N 2. Call completes. Y/N 3. Call completes and preempts ROUTINE call. Y/N Both preempted parties receive PNT. Y/N ROUTINE trunk reused. Y/N 4. Calls end. Y/N 5. Call completes. Y/N 6. Call completes. Y/N 7. Call completes and preempts ROUTINE call. Y/N Both preempted parties receive PNT. Y/N ROUTINE trunk reused. Y/N 8. Calls end. Y/N 9. Call completes. Y/N
		Notes:	

Table E-6.2. Tactical Network Gateway Test Procedures (continued)

Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
D c o n t i n u e d	**Voice – MLPP (continued)**	Preempt for reuse (answered): 10. Place an IMMEDIATE call from ON2 to TN2. 11. Place a FLASH call from ON3 to TN3. 12. Place all instruments on hook. 13. Place an IMMEDIATE call from ON1 to TN1. 14. Place a FLASH call from ON2 to TN2. 15. Place a FLASH OVERRIDE call from ON3 to TN3. 16. Place all instruments on hook. 17. Place a FLASH call from ON1 to TN1. 18. Place a FLASH OVERRIDE call from ON2 to TN2. 19. Place a FLASH OVERRIDE call from ON3 to TN3. 20. Place all instruments on hook. 21. Place a FLASH OVERRIDE call from ON1 to TN1. 22. Place a FLASH OVERRIDE call from ON2 to TN2. 23. Place a FLASH OVERRIDE call from ON3 to TN3. 24. Place all instruments on hook.	Preempt for reuse (answered): 10. Call completes. Y/N 11. Call completes and preempts PRIORITY call. Y/N Both preempted parties receive PNT. Y/N PRIORITY trunk reused. Y/N 12. Calls end. Y/N 13. Call completes. Y/N 14. Call completes. Y/N 15. Call completes and preempts IMMEDIATE call. Y/N Both preempted parties receive PNT. Y/N IMMEDIATE trunk reused. Y/N 16. Calls end. Y/N 17. Call completes. Y/N 18. Call completes. Y/N 19. Call completes and preempts FLASH call. Y/N Both preempted parties receive PNT. Y/N FLASH trunk reused. Y/N 20. Calls end. Y/N 21. Call completes. Y/N 22. Call completes. Y/N 23. ON3 receives BPA. Y/N 24. Calls end. Y/N
		Notes:	
E	**Voice – MLPP** Requirement: MFS, EOS, & SMEO Reference: Place all except two channels on the link under test out of service	Preempt for Reuse (Unanswered): 1. Originate a ROUTINE call from ON1 to TN1 and allow call to ring-no-answer. 2. Originate a ROUTINE call from ON2 to TN2 and allow call to ring-no-answer. 3. Place a PRIORITY call from ON3 to TN3. 4. Place all instruments on hook. 5. Originate a ROUTINE call from ON1 to TN1 and allow call to ring-no-answer. 6. Originate a PRIORITY call from ON2 to TN2 and allow call to ring-no-answer. 7. Place an IMMEDIATE call from ON3 to TN3. 8. Place all instruments on hook.	Preempt for Reuse (Unanswered): 1. TN1 ringing. Y/N 2. TN2 ringing. Y/N 3. Call completes and preempts ROUTINE call. Y/N ON3 receives PNT Y/N ROUTINE trunk reused. Y/N 4. Calls end. Y/N 5. TN1 ringing. Y/N 6. TN2 ringing. Y/N 7. Call completes and preempts ROUTINE call. Y/N ON1 receives PNT Y/N ROUTINE trunk reused. Y/N 8. Calls end. Y/N
		Notes:	

Table E-6.2. Tactical Network Gateway Test Procedures (continued)

Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
E c o n t i n u e d	**Voice – MLPP** Requirement: MFS, EOS, & SMEO Reference: Place all except two channels on the link under test out of service.	Preempt for Reuse (Unanswered): 9. Originate a PRIORITY call from ON1 to TN1 and allow call to ring-no-answer. 10. Originate an IMMEDIATE call from ON2 to TN2 and allow call to ring-no-answer. 11. Place a FLASH call from ON3 to TN3. 12. Place all instruments on hook. 13. Originate an IMMEDIATE call from ON1 to TN1 and allow call to ring-no-answer. 14. Originate a FLASH call from ON2 to TN2 and allow call to ring-no-answer. 15. Place a FLASH OVERRIDE call from ON3 to TN3. 16. Place all instruments on hook. 17. Originate a FLASH call from ON1 to TN1 and allow call to ring-no-answer. 18. Originate a FLASH OVERRIDE call from ON2 to TN2 and allow call to ring-no-answer. 19. Place a FLASH OVERRIDE call from ON3 to TN3. 20. Place all instruments on hook. 21. Originate a FLASH OVERRIDE call from ON1 to TN1 and allow call to ring-no-answer. 22. Originate a FLASH OVERRIDE call from ON2 to TN2 and allow call to ring-no-answer. 23. Place a FLASH OVERRIDE call from ON3 to TN3. 24. Place all instruments on hook.	Preempt for Reuse (Unanswered): 9. TN1 ringing. Y/N 10. TN2 ringing. Y/N 11. Call completes and preempts PRIORITY call. Y/N ON1 receives PNT Y/N PRIORITY trunk reused. Y/N 12. Calls end. Y/N 13. TN1 ringing. Y/N 14. TN2 ringing. Y/N 15. Call complete and preempted IMMEDIATE call. Y/N ON1receives PNT Y/N IMMEDIATE trunk reused. Y/N 16. Calls end. Y/N 17. TN1 ringing. Y/N 18. TN2 ringing. Y/N 19. Call complete and preempted FLASH call. Y/N ON1 receives PNT Y/N FLASH trunk reused. Y/N 20. Calls end. Y/N 21. TN1 ringing. Y/N 22. TN2 ringing. Y/N 23 ON3 receives BPA. Y/N 24. Calls end. Y/N
		Notes:	

Table E-6.2. Tactical Network Gateway Test Procedures (continued)

Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
F	**Voice – MLPP (continued)** **Requirement:** MFS, EOS, & SMEO **Reference:** Place all except two channels on the link under test out of service.	Preempt Not for Reuse (Answered): 1. Place a ROUTINE call from ON1 to TN1. 2. Place a PRIORITY call from ON2 to ON2. 3. Place all instruments on hook. 4. Place a PRIORITY call from ON1 to TN1. 5. Place an IMMEDIATE call from ON2 to ON1. 6. Place all instruments on hook. 7. Place an IMMEDIATE call from ON1 to TN1. 8. Place a FLASH call from ON2 to ON1. 9. Place all instruments on hook. 10. Place a FLASH call from ON1 to TN1. 11. Place a FLASH OVERRIDE call from ON2 to ON1. 12. Place all instruments on hook. 13. Place a FLASH OVERRIDE call from ON1 to TN1. 14. Place a FLASH OVERRIDE call from ON2 to ON1. 15. Place all instruments on hook. **Notes:**	Preempt Not for Reuse (Answered): 1. Call completes. Y/N 2. Call completes and preempts ROUTINE call Y/N Both preempted parties receive PNT. Y/N ROUTINE trunk returned idle Y/N 3. Call ends. Y/N 4. Call completes. Y/N 5. Call completes and preempts PRIORITY call. Y/N Both preempted parties receive PNT. Y/N PRIORITY trunk returned idle. Y/N 6. Call ends. Y/N 7. Call completes. Y/N 8. Call completes and preempts IMMEDIATE call. Y/N Both preempted parties receive PNT. Y/N IMMEDIATE trunk returned idle. Y/N 9. Call ends. Y/N 10. Call completes. Y/N 11. Call completes and preempts FLASH call. Y/N Both preempted parties receive PNT. Y/N FLASH trunk returned idle. Y/N 12. Call ends. Y/N 13. Call completes. Y/N 14. Originator B receives BPA. Y/N 15. Call ends. Y/N
G	**Voice – MLPP (continued)** **Requirement:** MFS, EOS, & SMEO **Reference:**	Preempt Not for Reuse (Unanswered): 1. Originate a ROUTINE call from ON1 to TN1 and allow call to ring-no-answer. 2. Place a PRIORITY call from ON2 to ON1. 3. Place all instruments on hook. 4. Originate a PRIORITY call from ON1 to TN1 and allow call to ring-no-answer. 5. Place an IMMEDIATE call from ON2 to ON1. 6. Place all instruments on hook. **Notes:**	Preempt Not for Reuse (Unanswered): 1. TN1 ringing. Y/N 2. Call completes and preempts ROUTINE call. Y/N ON1 received PNT. Y/N ROUTINE trunk returned idle. Y/N 3. Call ends. Y/N 4. TN1 ringing. Y/N 5. Call completes and preempts PRIORITY call. Y/N ON1 received PNT. Y/N PRIORITY trunk returned idle. Y/N 6. Call ends. Y/N

Table E-6.2. Tactical Network Gateway Test Procedures (continued)

<table>
<tr><th>Ref #</th><th>Configuration and/or Diagram</th><th>Test Procedure(s)</th><th>Expected Result(s)</th></tr>
<tr><td>G
c
o
n
t
i
n
u
e
d</td><td>Voice – MLPP (continued)
Requirement: MFS, EOS, & SMEO | Reference:</td><td>Preempt Not for Reuse (Unanswered):
7. Originate an IMMEDIATE call from ON1 to TN1 and allow call to ring-no-answer.
8. Place a FLASH call from ON2 to ON1.

9. Place all instruments on hook.
10. Originate a FLASH call from ON1 to TN1 and allow call to ring-no-answer.
11. Place a FLASH OVERRIDE call from ON2 to ON1.

12. Place all instruments on hook.
13. Originate a FLASH OVERRIDE call from ON1 to TN1 and allow call to ring-no-answer.
14. Place a FLASH OVERRIDE call from ON2 to ON1.
15. Place all instruments on hook.</td><td>Preempt Not for Reuse (Unanswered):
7. TN1 ringing. Y/N
8. Call completes and preempts IMMEDIATE call. Y/N
ON1 received PNT. Y/N
IMMEDIATE trunk returned idle. Y/N
9. Call ends. Y/N
10. TN1 ringing. Y/N

11. Call completes and preempts FLASH call. Y/N
ON received PNT. Y/N
FLASH trunk returned idle. Y/N
12. Call ends. Y/N
13. TN1 ringing. Y/N

14. ON2 receives BPA. Y/N
15. Call ends.</td></tr>
<tr><td></td><td></td><td colspan="2">Notes:</td></tr>
<tr><td>H</td><td>Voice – secure calls
Requirement: MFS, EOS, & SMEO | Reference:
Same as TP 1</td><td>1. Place a ROUTINE STU-III call from ONS to TNS. Repeat 10 times.
2. Place a ROUTINE STU-III call from TNS to ONS. Repeat 10 times.</td><td>See table below.</td></tr>
<tr><td></td><td colspan="3">Expected results:

<table>
<tr><th>ONS to TNS</th><th colspan="10">Call #</th></tr>
<tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr>
<tr><td>Call completes</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Secure</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Data Rate</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>MOS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

<table>
<tr><th>TNS to ONS</th><th colspan="10">Call #</th></tr>
<tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr>
<tr><td>Call completes</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Secure</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td><td>Y/N</td></tr>
<tr><td>Data Rate</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>MOS</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Notes:</td></tr>
</table>

Table E-6.2. Tactical Network Gateway Test Procedures (continued)

Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
I	**Facsimile** **Requirement:** MFS, EOS, & SMEO **Reference:** Same as TP 1	1. Transmit a facsimile from ONF to TNF. Repeat 10 times. 2. Transmit a facsimile from TNF to ONF. Repeat 10 times.	See table below.

Expected Results:

ONF to TNF	Fax #									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Fax completes	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
IEEE 167-187	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Data Rate										

TNF to ONF	Fax #									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Fax completes	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
IEEE 167-187	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Data Rate										

Notes:

Legend:

CAS – **Channel Associated Signaling**
CJCSI – **Chairman Joint Chiefs of Staff**
DN – **Destination Node**
EOS – **End Office Switch**
ID – Identification
ISDN – **Integrated Services Digital Network**
MFS – **Multifunction Switch**
ON – **Origination Node**
PIN – **Personal Identification Number**
PN – **PSTN Node**
PNT – **Preempt Notification Tone**
PRI – **Primary Rate Interface**
PSTN – **Public Switched Telephone Network**
Rec. – **Receive(s)**
SMEO – **Small End Office**
SUT – **System Under Test**
TP – **Test Procedure**
VoIP – **Voice over Internet Protocol**

E-6.3 Defense Red Switch Network (DRSN) Gateway. Table E-6.3 outlines the detailed test procedures for testing the SUT to DRSN interface. Objectives, criterion, and data required for this interface are contained in appendix D-6.3.

Table E-6.3. DRSN Gateway Test Procedures

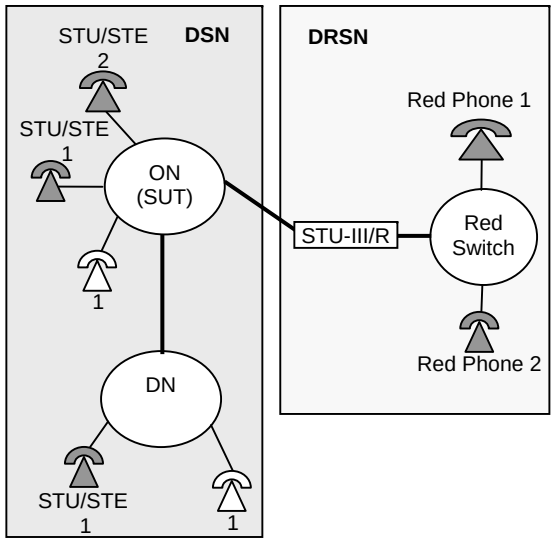
Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
A	**Voice** **Requirement:** MFS, EOS, & SMEO **Reference:** Configure ON (SUT) with 2 STU/STE(ONS1 and ONS2) and 1 analog phone (ON1). Configure DN with 1 STU/STE (DNS1) and 1 analog (DN1). Configure Red Switch with two Red Phones (R1 and R2).  	1. ONS1 calls DRSN STU-III/R @ ROUTINE. 2. ON1 calls ONS1 @ PRIORITY. 3. Hang up all instruments. 4. R1 calls ONS1 @ ROUTINE by dialing access code (9X) plus the number and #. 5. R2 calls R1 @ PRIORITY. 6. Hang up all instruments. 7. DNS1 calls DRSN STU-III/R @ ROUTINE. 8. DN1 calls DNS1 @ PRIORITY. 9. Hang up all instruments. 10. ONS1 calls DRSN STU-III/R @ ROUTINE.	1. ONS1 to STU-III/R call negotiates and connects @ Secret or above. Y/N Red Switch Prompts ONS2 to dial number. Y/N ONS1 dials R1 Y/N ONS1 to R1 call is completed. Y/N 2. ONS1 receives Preempt Notification. Y/N R1 receives Preempt Notification. Y/N ONS1 hangs up then rings @ Prec.Cadence. Y/N ON1 receives Precedence Ring Back. Y/N ON1 to ONS1 call completes. Y/N 3. Call ends. Y/N 4. ONS1 rings then answers the call. Y/N ONS1 receives voice prompt to go secure. Y/N ONS1 goes secure and negotiates @ Secret or above. Y/N R1 to ONS1 call is completed. Y/N 5. R1 receives Preempt Notification. Y/N ONS1 receives Preempt Notification. Y/N R1 hangs up then rings @ Prec. Cadence. Y/N R2 receives Precedence Ring Back. Y/N R2 to R1 call completes. Y/N 6. Call ends. Y/N 7. DNS1 to STU-III/R call negotiates and connects @ Secret or above. Y/N Red Switch Prompts DNS1 to dial number. Y/N DNS1 dials R1. Y/N DNS1 to R1 call is completed. Y/N 8. DNS1 receives Preempt Notification. Y/N R1 receives Preempt Notification. Y/N DNS1 hangs up then rings @ Prec.Cadence. Y/N DN1 receives Precedence Ring Back. Y/N DN1 to DNS1 call completes. Y/N 9. Call ends. Y/N 10. ONS1 to STU-III/R call negotiates and connects @ Secret or above. Y/N Red Switch Prompts ONS1 to dial number. Y/N ONS1 dials R1. Y/N ONS1 to R1 call is completed. Y/N
		Notes:	

Table E-6.3. Defense Red Switch Network Gateway Test Procedures (continued)

Ref #	Configuration and/or Diagram	Test Procedure(s)	Expected Result(s)
A c o n t i n u e d	**Voice** **Requirement:** MFS, EOS, & SMEO **Reference:**	11. ONS2 calls DRSN STU-III/R @ PRIORITY. 12. Hang up all instruments 13. R1 calls ONS2 @ ROUTINE by dialing access code (9X) plus the number and #. 14. R2 calls DNS1 @ PRIORITY by dialing access code (9X) plus the number and #.	11. ONS1 receives Preempt Notification. Y/N R1 receives Preempt Notification. Y/N ONS2 to STU-III/R call negotiates and connects @ Secret or above. Y/N Red Switch Prompts ONS2 to dial number. Y/N ONS2 dials R1. Y/N ONS2 to R1 call is completed. Y/N 12. Call ends. Y/N 13. ONS2 rings then answers the call. Y/N ONS2 receives voice prompt to go secure. Y/N ONS2 goes secure and negotiates @ Secret or Above. Y/N R1 to ONS2 call is completed. Y/N 14. R1 receives Preempt Notification. Y/N ONS2 receives Preempt Notification. Y/N DNS1 rings then answers the call. Y/N DNS1 receives voice prompt to go secure. Y/N DNS1 goes secure and negotiates @ Secret or above. Y/N R2 to DNS1 call is completed. Y/N
		Notes:	

Legend:

CAS	– **Channel Associated Signaling**	MFS	– **Multifunction Switch**	PSTN	– **Public Switched Telephone Network**
CJCSI	– **Chairman Joint Chiefs of Staff**	ON	– **Origination Node**	Rec.	– **Receive(s)**
DN	– **Destination Node**	PIN	– **Personal Identification Number**	SMEO	– **Small End Office**
EOS	– **End Office Switch**	PN	– **PSTN Node**	SUT	– **System Under Test**
ID	– Identification	PNT	– **Preempt Notification Tone**	TP	– **Test Procedure**
ISDN	– **Integrated Services Digital Network**	PRI	– **Primary Rate Interface**	VoIP	– **Voice over Internet Protocol**

E-6.4 Enhanced Mobile Satellite System (EMSS). DSN switching systems may be required to interface to the EMSS. Currently, no Chairman Joint Chiefs of Staff (CJCS) requirements exist for this DSN to EMSS interface. Test procedures will be developed at a later date once requirements have been approved.

E-6.5 North Atlantic Treaty Organization (NATO) Gateway Communication Switch (NGCS). DSN switching systems may be required to interface to the NGCS. Currently, no Chairman Joint Chiefs of Staff (CJCS) requirements exist for this DSN to NGCS interface. Test procedures will be developed at a later date once requirements have been approved.