<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Rail Systems Maintenance</th>
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<tbody>
<tr>
<td>TSC</td>
<td>Network Systems Maintenance</td>
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<tr>
<td>TSC Description</td>
<td>Implement preventive and corrective maintenance activities of network systems</td>
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<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
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<th>Level 6</th>
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<td>PTP-RSM-1020-1.1</td>
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<tr>
<td>Carry out scheduled preventive maintenance on network systems</td>
<td>Conduct corrective maintenance on network systems</td>
<td>Troubleshoot faulty network systems to locate faults and recommend rectification methods</td>
<td>Diagnose root causes of network systems failure and review maintenance plans to prevent fault recurrence</td>
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**Knowledge**

- Operating principles and functions of network systems
- Types of components in network systems
- Types of network systems equipment that includes:
  - Servers
  - Workstations
  - Switches and routers
  - Modems
  - Local Area Network (LAN) and Wide Area Network (WAN) systems
- Procedures for servicing network systems equipment in accordance with organisational maintenance procedures, Work Instructions (WI) and/or Original Equipment Manufacturer (OEM) technical manuals
- Types of software and hardware tools for carrying out preventive maintenance on network systems
- Safety guidelines on use of tools and equipment for preventive maintenance
### Abilities

- Perform preparation work to conduct preventive maintenance on network systems
- Follow organisational maintenance procedures, WI and/or OEM technical manuals to carry out preventive maintenance on network systems
- Perform systems functional checks
- Adhere to safety guidelines and operating instructions for tools and equipment during maintenance work
- Record network systems maintenance activities
- Interpret work orders and prepare for corrective maintenance
- Apply power isolation procedures during network systems maintenance
- Apply debugging and rectification procedures to software bugs and hardware faults of network systems
- Dismantle network hardware and/or equipment for corrective maintenance
- Carry out rectification, repair and/or replacement of faulty hardware and/or equipment components
- Reassemble and reinstate network systems
- Perform functional tests on network systems
- Apply operating and safety measures in operating tools and equipment during maintenance work
- Record and collate documentation of network systems maintenance work
- Use troubleshooting tools and equipment to locate and analyse causes of faults on network systems
- Recommend corrective actions for identified faults on network systems
- Implement procedures on safe device usage during maintenance work
- Analyse maintenance work documented for network systems to identify possible workflow improvements so as to prevent fault recurrence
- Establish structured failure investigation and specify functional testing requirements
- Apply failure investigation methods to diagnose root cause failure of network systems
- Develop debugging and rectification methods and techniques
- Review organisation network system maintenance procedures
- Propose new and/or enhanced maintenance procedures and/or, WI in reference to OEM technical recommendations
- Monitor overall maintenance progress of network systems to determine system performance reliability and effectiveness
- Develop long-term solutions by analysing diagnostic data to prevent faults and failures recurrence
- Develop test procedures for system performance checks
- Coordinate network system maintenance with other rail systems maintenance needs