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Allowable Router Device in Indonesia

Based on the attachment regulations and communications minister informatics
number 6, 2014

Technical Requirements

1. Power Supply

Router devices should be working in the following power supply:

- a. Direct current voltage up to -60 Vdc (positive ground); and/or
- b. Alternating current voltage : 100-200 Vac/50Hz

2. Environment Condition

The router device should be able to work in the following condition:

- a. Room Temperature : $10^{\circ}\text{C} < T < 40^{\circ}\text{C}$
- b. Relative humidity : $40\% < H < 90\%$

3. Safety and Security System

- a. Protection toward the over-current (overload protection)
- b. Total Audible Noise Level (dBA) emitted by the device is < 75 dBA at 1 meter distance and 1.5 meters of height.
- c. Self Declaration (SD) to guarantee the data security system or missed information; and
- d. Cooling system



4. **Electricity Safety Requirements:** Health and Electromagnetic compatibility (EMC)

Router device should comply with these following requirements:

- a. Electricity health and safety requirements based n the international IEC 60950-1, or other equally similar international standard; and
- b. Electromagnetic Compatibility Requirements based on the Indonesian National Standard (SNI) CISPR 22:2013 and/or Indonesian National Standard (SNI) CISPR 24:2012.

5. **System**

a. Network System

The router device should be able to be connected to the kind of networks such as LAN and WAN.

b. Physical Layer and data link at the data network.

i. LAN

1. Ethernet should comply with IEEE 802.3 and LLC 802.2 at the data link layer; and/or
2. The WiFi complies with IEEE 802.11

ii. WAN

WAN channel should use one of the following networks:

1. Copper network such as RS 232, V.35, X.21, EI, Ethernet must comply with ITU-T G.703, RS 449, RS 530 at the physical layer, and using one of the HDLC, PPP, X.25, Frame Relay (complied with the ITU-T/ANSI Annex D), MPLS, Euro ISDN, and ATM at the data link layer.
2. Optical network (SDH, WDM, DWDM, Ethernet); or
3. Radio Frequency network must comply with the Indonesian Constitution.

6. **Router Device**

a. Hardware

i. Hardware structure of router at least should have the following part:

1. RAM;
2. ROM;
3. Processor;
4. Power Supply;
5. Indicator and Operation Button; and
6. Two kinds of connector (console and data communication)



b. Software

i. Software Structure

File types of the router device at least should have:

1. Operating System File;
2. File Configuration
3. Firmware

Those three file should not be able to be deleted even though the router power supply is disconnected.

ii. Software Function

Software here is used to manage the processing, application connection building operation, and maintenance. And it should have at least:

1. Diagnostic tool
2. Software identification
3. Log file
4. Restore and Reset
5. Help Menu and Help File

c. Router Device Management

Router Device Management should be able to be done:

- i. Locally (direct connection) by using craft terminal or others; and
- ii. Remotely, by using one of these ways: SNMP, Telnet, SSH or web-based or other protocols as network management alternative.

d. System Access

To guarantee operational safety, router device should have at least:

- i. Operational Access by using password verification; and
- ii. There is verification system for all critical configuration changing to guarantee the system reliability.

e. Interoperability

Router device should be able to communicate with other router device as stated in OSI standard. Interoperability between router devices is tested by using:

- i. Ping;
- ii. Telnet session; and
- iii. Routing table convergence

f. Addressing System

Router device should apply the addressing system as followed:

i. Routing Protocol

This routing protocol is proprietary and used by the router device to switch the customer traffic to other router device. Besides, the router device should also own one of these routing protocols:

1. IS-IS;
2. OSPF



3. RIP;
 4. BGP; or
 5. Static
- ii. Routed Protocol

This is a protocol especially used to support customer traffic distribution by sharing the addressing information. In this case, the protocol has to use IPv4 standard and has the ability of IPv6 implementation.

Device Completeness

Router devices that about to be tested should be completed with:

1. Router Device Identity, which lists the brand name, type/model, Country of Origin, and serial number.
2. Router Operation Instruction (in English or Indonesian).

