

2.5 Redundancy Configuration in User Access Lines

2.5.1 Redundancy configuration overview

In the access lines (hereafter, User Access Lines) to the User Network from user points, a user who chooses a redundancy constructs the redundancy configuration according to the configuration shown in the figure below. If the redundancy configuration is implemented, the fault tolerance is enhanced in the User Access Line, because the access line is automatically switched to the backup line if the main line fails.

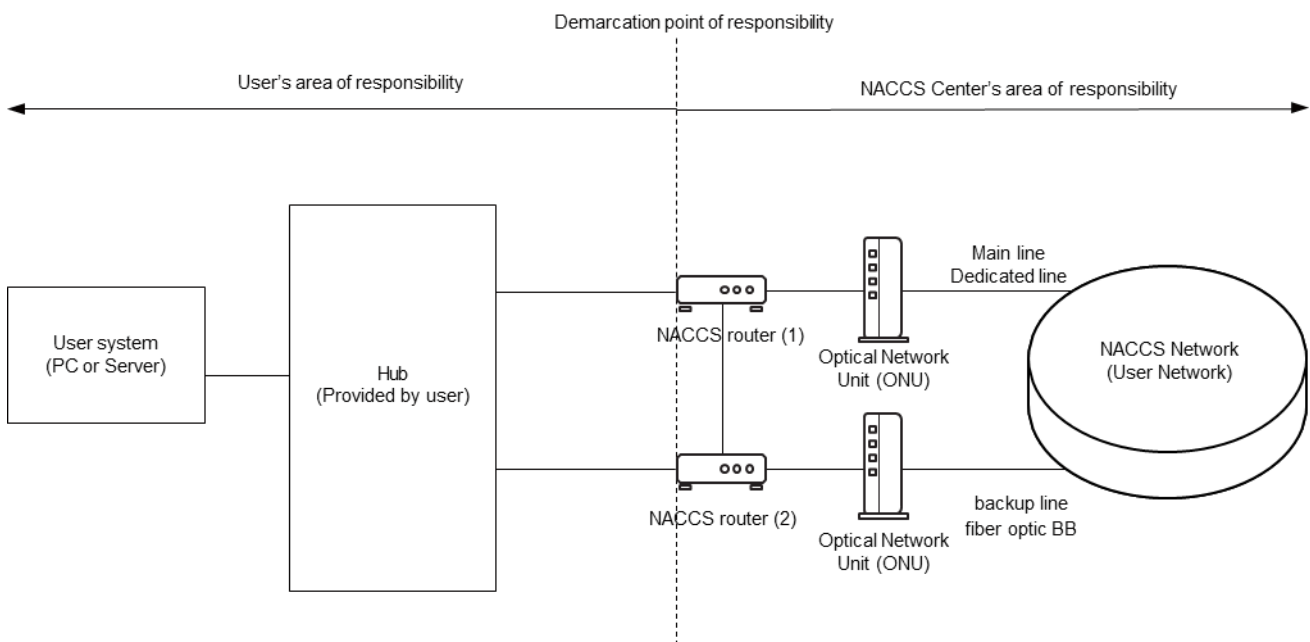


Figure 2.5.1 Redundancy configuration Outline

2.5.2 Line configuration in the redundancy configuration

As Figure 2.5.1 shows, the redundancy configuration consists of a main line (dedicated line: 1Mbps or higher) and a backup line (Fiber Optic Broadband).

2.5.3 Range of responsibility in the redundancy configuration

As Figure 2.5.1 shows, NACCS Center provides two NACCS routers for the redundancy configuration. The area of responsibility of NACCS Center is up to the ports of those two NACCS routers. The area of responsibility of the user is the hub and the user system (Computer or server) from the cable in the LAN connected to the NACCS routers.

2.5.4 Caution for redundancy configuration

The following lists the cautions to be aware of when implementing a redundancy configuration.

- The user provides the devices listed in Table 2.5.1.
- The user connects the hub to the NACCS router (1) and the NACCS router (2) (See Figure 2.5.1).
- The ports connecting to the NACCS router (1), the NACCS router (2) and the user system (Computer or server) in the hub are set in the same network (same VLAN).

Table 2.5.1 Devices provided by the user

Name	Specification, Quantity, etc.
Hub	Standard: IEEE802.3: 10BASE-T IEEE802.3u: 100BASE-TX IEEE802.3ab: 1000BASE-T No. of ports: 1000BASE-T/100BASE-TX/10BASE-T (RJ-45 connector) × 3 ports or more * Two ports are dedicated to connect to two NACCS routers Function supported: Auto-Negotiation (10/100, Full/Half-Duplex) Auto-MDI/MDI-X
LAN cable	UTP cables × 3 or more *Category3 or higher for 10BASE-T, Category5 or higher for 100BASE-TX, and Category5e or higher for 1000BASE-T. * Two cables are used for connection to two NACCS routers

* Redundancy can be added to the hubs prepared by the user. However, implementation is the user's responsibility. When redundancy is added to the hubs, they shall be configured to appear as one hub from the NACCS routers (1), (2).