

# Remote Optical Fiber Monitoring System

## Background

A number of optical fibers were disconnected at the Great East Japan Earthquake (3.11)



To restore connections quickly



It's necessary to pinpoint the failure point of the optical fiber cable even during management network failure.



## Service Concept

NW center



Monitoring system (Administrator)

Alternated NW (at the time of disaster)

Management NW (at the time of non-disaster)

Monitoring system terminal



OTDR\*



Optical Switch

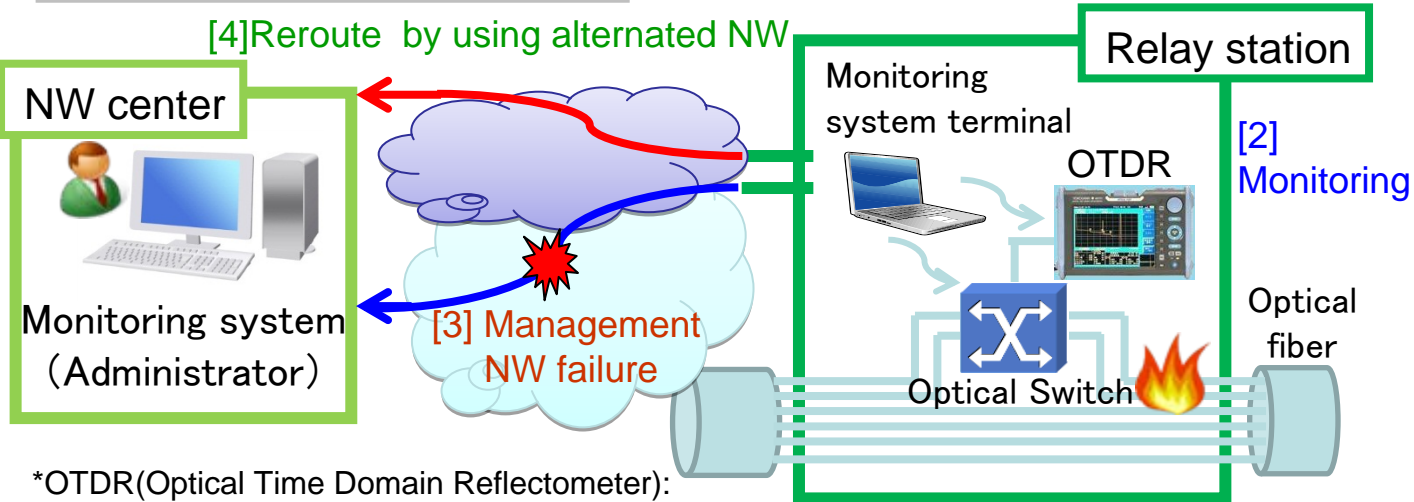
Optical fiber

\*OTDR: Optical Time Domain Reflectometer

- Remote Optical Fiber Monitoring System can pinpoint failure points of optical fiber cable quickly by using OTDR.
- By using an alternated network, the network administrator can obtain the monitored results even during management network failure.

# Remote Optical Fiber Monitoring System

## Operating Summary



\*OTDR(Optical Time Domain Reflectometer):  
Instrument that measure loss of fiber,  
connection loss, power of reflection, and  
distance to failure point.

**[1] Fiber cut or  
increase of fiber loss**

**[1] Fiber cut or increase of fiber loss occurs due to the disaster.**

**[2] OTDR\* monitors the optical fiber.**

**[3] The administrator can not obtain the monitored results because of management network failure.**

**[4] Using an alternated network(e.g. 3G mobile network), the administrator can get the monitored results.**