

自动化

基于调度运行管理系统的继电保护统计分析及运行管理系统网络传输模式

赵杰¹, 林俐², 郭文奇², 沈晓凡³, 周泽昕⁴

1. 华北电力大学 电气与电子工程学院, 北京市 昌平区 102206; 2. 中国电力科学研究院, 北京市 海淀区 100192

摘要:

针对国网公司总部和网省公司继电保护信息多级管理的需求, 基于调度运行管理系统(operation management system, OMS)互联系统构建了继电保护信息通道的网络传输模式, 即系统软件及数据库分布在客户端, 通过OMS互联系统传输数据, 解决了继电保护信息管理流程网络化的问题。基于该模式的继电保护统计分析及运行管理系统采用满足国网公司DL/T623—2008《继电保护及安全自动装置评价规程》要求的统一规范数据格式及分区管理的分布式数据库设计方法, 以保证各级单位数据一致, 采用E语言格式传输数据以提高信息安全性。

关键词:

Networking Transmission Mode of Protective Relayings Statistical Analysis and Operation Management System on the Basis of Dispatching Operation Management System

ZHAO Jie¹, LIN Li¹, GUO Wen-qi¹, SHEN Xiao-fan², ZHOU Ze-xin²

1. School of Electrical and Electronic Engineering, North China Electric Power University, Changping District, Beijing 102206, China; 2. China Electric Power Research Institute, Haidian District, Beijing 100192, China

Abstract:

According to the requirement of State Grid Corp. and provincial power network companies in multilevel management of protective relaying information, a network transmission mode is proposed, in which the channel for protective relaying information is based on interconnected operation management system (OMS), i.e., the system software and database are distributed at client-sides and the data transformation is implemented by interconnected OMS, thus the networking of information management process of protective relaying is solved. The unified normative data format and the design method for partitionally managed distributed database, specified in Evaluation of Automatic Devices of Relay Protection and Safety Procedures, which is drafted by State Grid Corp. and numbered as DL/T623-2008, are utilized in the statistics and analysis of protective relaying based on the proposed mode to ensure the data consistency in different levels, and the E-language file format is used in the data transmission to improve the information security.

Keywords:

收稿日期 2009-10-12 修回日期 2009-12-15 网络版发布日期 2010-03-16

DOI:

基金项目:

通讯作者: 赵杰

作者简介:

作者Email: zhaojiepy@sina.com

参考文献:

- [1] 沈晓凡, 舒治淮, 刘宇, 等. 2007年国家电网公司继电保护装置运行情况[J]. 电网技术, 2008, 32(16): 5-8. Shen Xiaofan, Shu Zhihuai, Liu Yu, et al. Operation situation of protective relaying of State Grid Corporation of China in 2007 [J]. Power System Technology, 2008, 32(16): 5-8(in Chinese).
- [2] 曾克娥. 电力系统继电保护装置运行可靠性指标探讨[J]. 电网技术, 2004, 28(14): 83-85. Zeng Ke'e. Research on operation situation and reliability indices of protective relaying in power system [J]. Power System Technology, 2004, 28(14): 83-85(in Chinese).
- [3] 陈丽敏. 三明地区电网继电保护

扩展功能

本文信息

▶ Supporting info

▶ PDF(394KB)

▶ [HTML全文]

▶ 参考文献[PDF]

▶ 参考文献

服务与反馈

▶ 把本文推荐给朋友

▶ 加入我的书架

▶ 加入引用管理器

▶ 引用本文

▶ Email Alert

▶ 文章反馈

▶ 浏览反馈信息

本文关键词相关文章

本文作者相关文章

PubMed

故障录波信息系统的建设与应用[J]. 电网技术, 2008, 32(S2): 161-165. Chen Limin. Establishment and applications of protective relaying faults record information system in Sanming regional electric power network[J]. Power System Technology, 2008, 32(S2): 161-165(in Chinese). [4] 王振树, 张波, 孟昭勇. 电力系统继电保护及故障信息子站系统的方案设计[J]. 继电器, 2006, 34(7): 65-69. Wang Zhenshu, Zhang Bo, Meng Zhaoyong. Design of PRFIS subsystem[J]. Relay, 2006, 34(7): 65-69(in Chinese). [5] 国家电网公司. DL/T 623—2008电力系统继电保护及安全自动装置统计评价规程[S]. [6] 古锋. 继电保护及故障信息系统通信模型研究[J]. 电网技术, 2007, 31(7): 73-77. Gu Feng. Research on communication model for protective relaying and fault information system[J]. Power System Technology, 2007, 31(7): 73-77(in Chinese). [7] 韩晓萍, 李佰国, 王肃, 等. 继电保护及故障信息系统的设计与实现[J]. 电网技术, 2004, 28(18): 16-19. Han Xiaoping, Li Baiguo, Wang Su, et al. Design and realization of relay protection and fault information system[J]. Power System Technology, 2004, 28(18): 16-19(in Chinese). [8] 谢熹, 吕飞鹏, 雷云川, 等. 基于工作流的继电保护定值管理系统[J]. 电网技术, 2006, 30(16): 64-69. Xie Xi, Lü Feipeng, Lei Yunchuan, et al. Setting management system of protective relaying based on workflow[J]. Power System Technology, 2006, 30(16): 64-69(in Chinese). [9] 马永光, 陆振国, 林永君. 基于Internet的电厂远程实时监控系統[J]. 电网技术, 2007, 31(2): 80-83. Ma Yongguang, Lu Zhenguo, Lin Yongjun. An internet based remote real-time monitoring and control system for power plant[J]. Power System Technology, 2007, 31(2): 80-83(in Chinese). [10] 王玲玲, 刘惊雷, 马晓敏. 基于GIS的污染源管理信息系统设计与实现[J]. 微计算机信息, 2008, 24(1-1): 174-175. Wang Lingling, Liu Jinglei, Ma Xiaomin. Design and realization of pollution source information management system based on GIS [J]. Microcomputer Information, 2008, 24(1-1): 174-175(in Chinese). [11] 李晓骏, 邱家驹. 基于Web技术的配电网地理信息系统的设计与实现[J]. 电网技术, 2003, 27(4): 54-58. Li Xiaojun, Qiu Jiaju. Design of a distribution geographic informationsystem based on Web technique[J]. Power System Technology, 2003, 27(4): 54-58(in Chinese). [12] 孟平, 苏鸿根, 王昭顺. B/S体系结构及其在测试管理系统中的应用[J]. 微电子学与计算机, 2004, 21(2): 25-28. Meng Ping, Su Honggen, Wang Zhaoshun. Research on B/S architecture and it's application in test management system [J]. Microelectronics & Computer, 2004, 21(2): 25-28(in Chinese). [13] 李国庆, 潘振波, 王丹, 等. 基于C/S与B/S混合架构的配电地理信息系统[J]. 电网技术, 2009, 33(6): 102-106. Li Guoqing, Pan Zhenbo, Wang Dan, et al. A distribution geographic information system based on hybrid structure of C/S and B/S [J]. Power System Technology, 2009, 33(6): 102-106(in Chinese). [14] 钱菁. 网络数据库安全机制研究[J]. 计算机应用研究, 2003, 20(12): 90-92. Qian Jing. Research on security mechanism of network database [J]. Application Research of Computers, 2003, 20(12): 90-92(in Chinese). [15] 刘林, 连迺遐. C/S体系结构下电力企业 MIS 设计的新考虑[J]. 中国电机工程学报, 1998, 18(6): 421-425. Liu lin, Lian Erxia. The new considerations of MIS design of electric power enterprises under the C/S system structure[J]. Proceedings of the CSEE, 1998, 18(6): 421-425(in Chinese).

本刊中的类似文章