

the owner of the Home Network) something of value such as reduced cost of Internet service, free Internet service, or a net payment. The contracting company may alternatively or additionally subsidize the purchase costs of the Home Network Server or other equipment.

[0017] Since Home Network Servers may be located in widely different geographic areas, the use of Home Network Servers for distributed computing also distributes the load on electric utility companies.

[0018] In addition, as CPUs become faster and storage devices such as hard drives and optical storage devices become larger, and fast Internet connections become more widespread, the distributed computing system can also be used as a distributed server system, making large server farms (with their attendant demands on electric utilities) unnecessary.

DESCRIPTION OF THE DRAWINGS

[0019] Fig. 1 shows a configuration of a home network server.

[0020] Fig. 2 shows a configuration of the invention with a firewall between the Internet connection and the Home Network as well as a firewall between the Internet connection and the Distributed Computing application.

[0021] Fig. 3 shows an alternate configuration of the invention with a firewall between the Internet connection and the Home Network as well as a firewall between the Home Network and the Distributed Computing application.

DETAILED DESCRIPTION

[0022] In the following description, numerous specific details are set forth to provide a thorough understanding of the invention. However, it is understood that the invention may be

practiced without these specific details. In other instances, well-known circuits, structures and techniques have not been shown in detail in order not to obscure the invention.

[0023] The general form of the Home Network System is shown in Figure 1. Home Network Server 101 is of conventional design and includes a CPU, memory, mass storage (typically a hard disk drive for operations and a CD-ROM or DVD-ROM Drive for software installation), video display capabilities, and a keyboard. Because video from Home Network Server 101 is used mostly for system installation and monitoring, a standard low-cost video system and monitor may be used. A recordable/rewritable version of the CD-ROM or DVD-ROM drive may be used to provide system and network backup capabilities. An alternative form of system and network backup such as one using magnetic tape may also be used. In addition, Home Network Server 101 may provide sound capabilities for the purpose of providing audible warnings and alarms.

[0024] Home Network Server 101 uses Modem 103 to connect to the Internet. Preferably, Modem 103 provides an always-on connection using DSL, a cable modem, or equivalent. However, as an alternative, Modem 103 may provide a dial-up connection to the Internet.

[0025] Home Network Server 101 connects to Router, Switch, or Hub 102. Although a Router is preferable, a Switch or a Hub may also be used.

[0026] Router, Switch, or Hub 102 connects to one or more clients such as PC_1 104 or Sensor/Actuator_1 106. More than one client PC may be used, such as PC_n 105, and more than one Sensor/Actuator may be used, such as Sensor/Actuator_n 107. Sensor/Actuators are used to control and/or monitor the home's systems such as HVAC and Security and appliances such as refrigerators, washers, and dryers.

[0027] As shown in Figure 2, software Firewall 202 protects Home Network 203 from unwanted intrusions coming from Internet 201. Firewall 204 protects Distributed Computing