
provisioning remote services

Providing consumers with their desired services.

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This problem has been introduced into the domain of telecom providers and cable-television suppliers as they broadened their range of products and started to delve into each others markets.

The maintenance people of a service provider have to administer and configure devices and daemons running on server machines. This can be quite cumbersome and is a good candidate for automation.

A system for configuring and maintaining a network of devices for routing and processing and receiving ip data must be maintained. A lot of it is automated. But this is not standard of the shelf software. Big and small service providers often build their own.

The systems involved run very different hardware. Some are configurable through snmp interfaces others through html over http interfaces. Again others run commandline interfaces on proprietary operating systems.

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overview

A system for the configuring and maintaining of a network of client machines and servers must be constructed. Apart from those machines the network contains routers, firewalls and packet shapers. All those machines have administrative interfaces, access to which is now handled by human hand wearing out keyboards.

Processes

Several engineers, also responsible for maintenance of server hard- and software, are taking care of the handling the work mentioned below as far as it takes place at the main service centre. A few dozen of less educated technicians do the work in the field.

adding services

1. A client pays and data gets forwarded by the finance department.

2. Depending on the type of subscription, a modem, a port on a head-end system, an dns-entry (name and ip) are reserved. number of email address and quota requirements are decided by subscription type, which is included in the forwarded data.
3. A visit to the clients house/site is scheduled to install whatever hardware is needed at the clients and at the district central.
4. Configuration tools are called to activate the services needed. If on site replacements are being made, adjustments in configuration are done (while installing if possible).

altering settings

1. Users call customer service asking for a change of their services.
2. They call the help desk to actualize the changes. The help desk creates a ticket for the engineers.
3. The engineers get the ticket and log in to the site or sites the need a change in configuration.
4. The engineers schedule a visit of one of the engineers to the clients if the altered service level requires a change in hardware, i.e. changing to different type of modem or head end system or in case of contract breach removing a connection in the district central.

Ideally the users would log in to a secure site. This site would

- Allow users to alter their domain name. provided that it does not exist, and is a sub-domain to the providers zone.
- Allow users to alter their email address(es), provided that they don't exist or are in their own domain.
- Allow users to change server side spam filter options.
- Serve a order form for users to alter their service level.

"maintenance" settings

Engineers monitor systems and take actions both to prevent problems and to solve problems that did occur. But "maintenance" also means reacting to abuse, and set tabs as justice departments require so.

From time to time new (internet) applications are invented. New game paradigms, new ways of digital communication and new data formats requiring new protocols. The system and processes have to be adjusted to satisfy these new requirements. Often this can not be done for the entire network at once. Though the automation of the hardware configuration is the main goal of the system, this changing and unplannable requirement lays a heavy administrative burden on the system to be build.