Managing HP UX Over the Internet Remotely and Securely

Juggy Krishnamurthy

VP Engineering & Operations, Arula Systems

10670 N. Tantau Ave., Suite 200

Cupertino, CA 95014

Phone: 408-996-3400

Fax: 408-996-3406

juggy@arula.com

What is HP-UX Management?

Administrators typically need to address 3 things when dealing with HP-UX

- Installation—Configuration management

- Upgrades—Workload management

- Reboot—Fault management

How is HP UX Management Done Today?

- Console access using a dumb terminal

- Telnet access over the network

Issues with Access via Dumb Terminal

- Requires access of the computer which typically housed in a secured and difficult to access area

- Needs local presence

- Cannot provide remote support effectively

Issues with Access via Telnet

- Security concerns

- Cannot access system when either the network or systems is down

- Does not allow simultaneous access

- Does not support block mode operation

Market Trends

- Number of servers are rapidly increasing
- Geographical dispersion of equipment
- Inadequate resources to handle the increasing load
- Data centers are getting denser
- Headless and lights out operation
- Need to access experts that are not locally present
- Increasing uptime and tighter SLA requirements

Addressing the Requirements

- Use internet as a communication media

- Use the browser to provide anytime anywhere access

- Provide adequate security so that data transmission is encrypted

The Solution

- From anywhere
- With any browser
- To any system
- With security
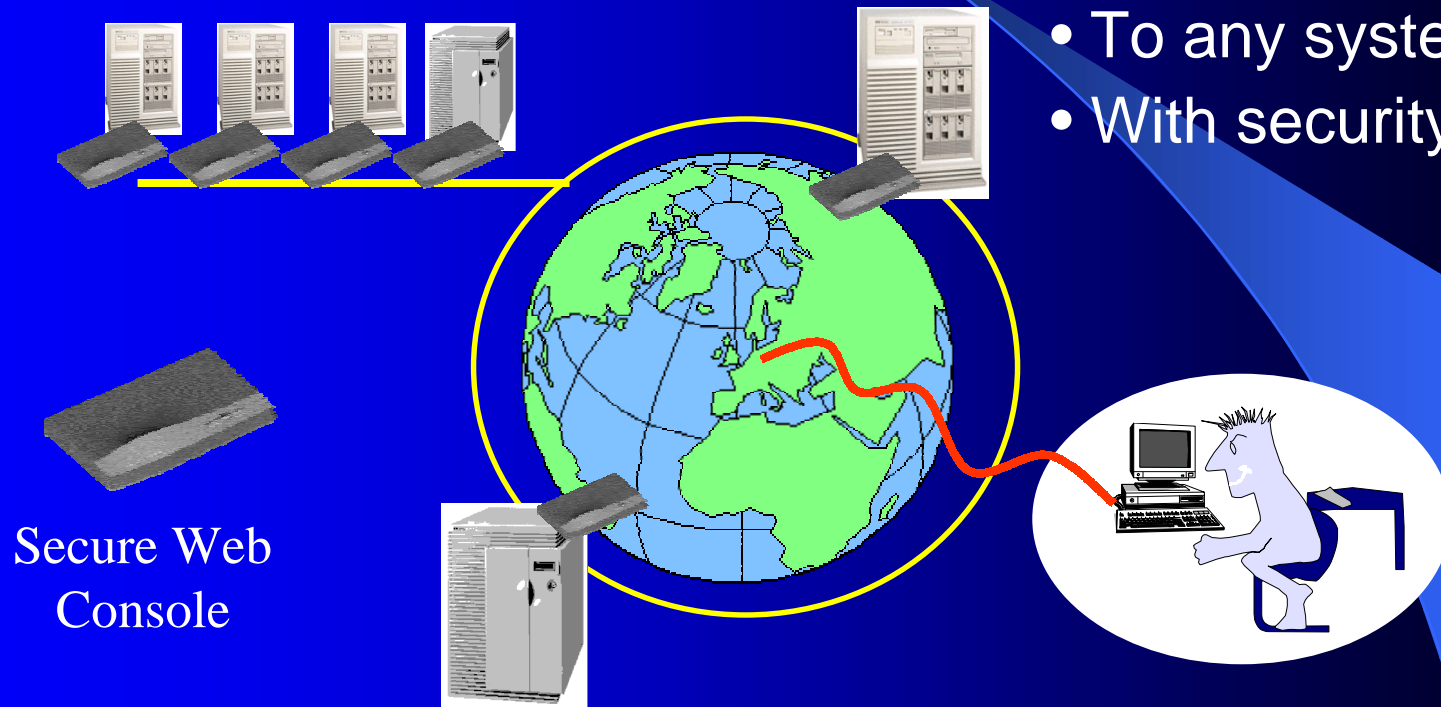
Secure Web Console

Instant access to system console
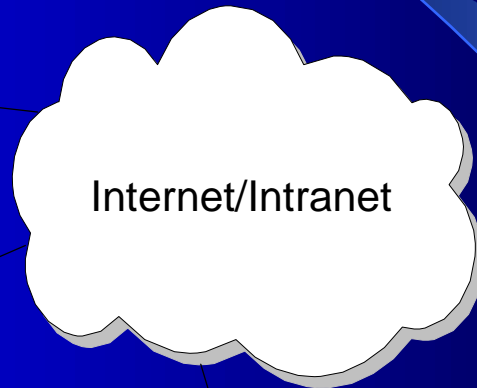
HP Secure Web Console

- Provides direct browser based access to the server's console port
- Allows the remote operator to issue powerful, low-level HP-UX commands and functions
  - Rebooting from alternate media
  - Re-kerneling
  - Reconfiguring file systems
  - Secure access

What is HP Secure Web Console?

- Internet appliance that connects directly to the server console port over RS-232

- Appliance has its own processor and flash memory that houses the java applet that enables the console view to transported over the internet

- The device also provides the required security to protect the target device

Deployment

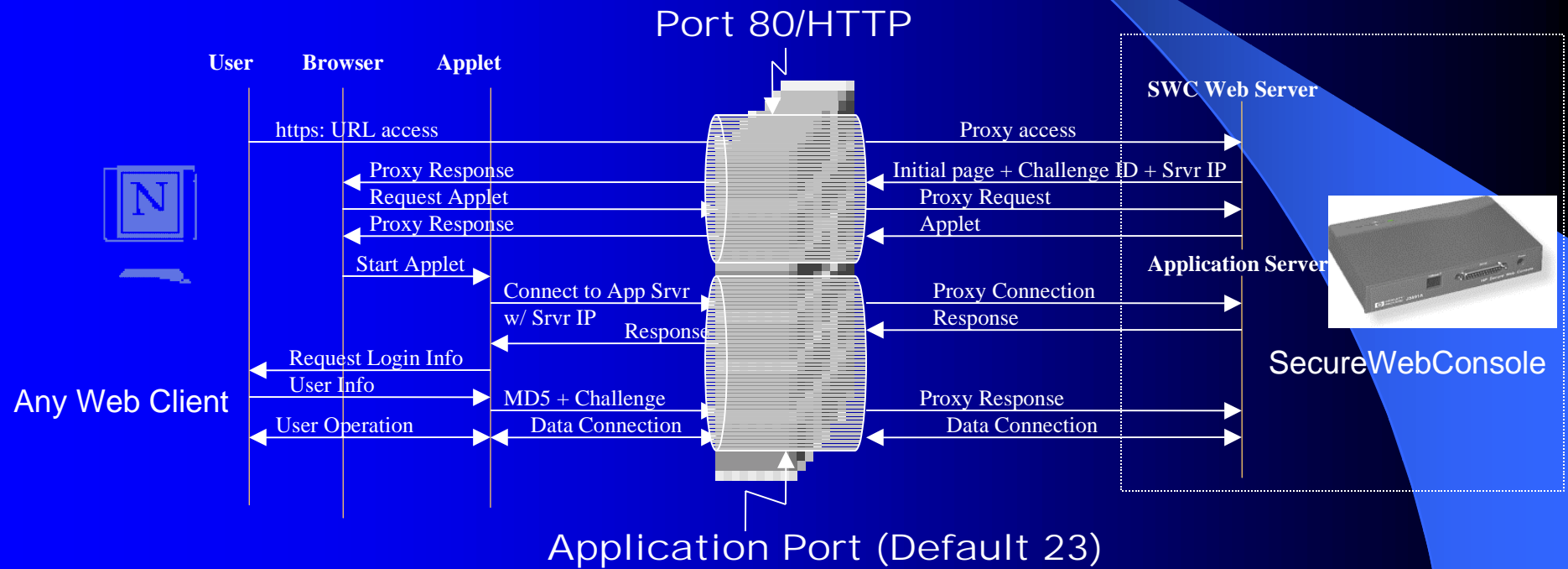Internet/Intranet

Serial Link

LAN

End Host System

HP Secure web Console

Features

- Powerful server management
- Mirrored access
- Easily scalable
- History
- Secure
- Browser based
- Easy upgrades
- Easy to install

Theory of Operation

Port 80/HTTP

User **Browser** **Applet**

SWC Web Server

https: URL access → Proxy access

Proxy Response ← Initial page + Challenge ID + Srvr IP

Request Applet → Proxy Request

Proxy Response ← Applet

Start Applet

Application Server

Connect to App Srvr w/ Srvr IP → Proxy Connection

Response ← Response

Request Login Info

User Info → MD5 + Challenge → Proxy Response

User Operation ← Data Connection ← Data Connection

Any Web Client

SecureWebConsole

Application Port (Default 23)

Benefits

- Allows a single operator to access and manage multiple servers located in various locations

- Provides a uniform way to manage heterogeneous equipment

- Multiple simultaneous access

- Remote access with security

- Scalable

Extensions

- Increased security support
  - Radius
  - SSL
- Notification services (SMTP)
- Scripting
- SNMP support
- Ability to create agents to effectively manage server functions
- Aggregation manager to handle large number of devices
- Objective—Provides an easy to use highly customizable management platform

Initial Login
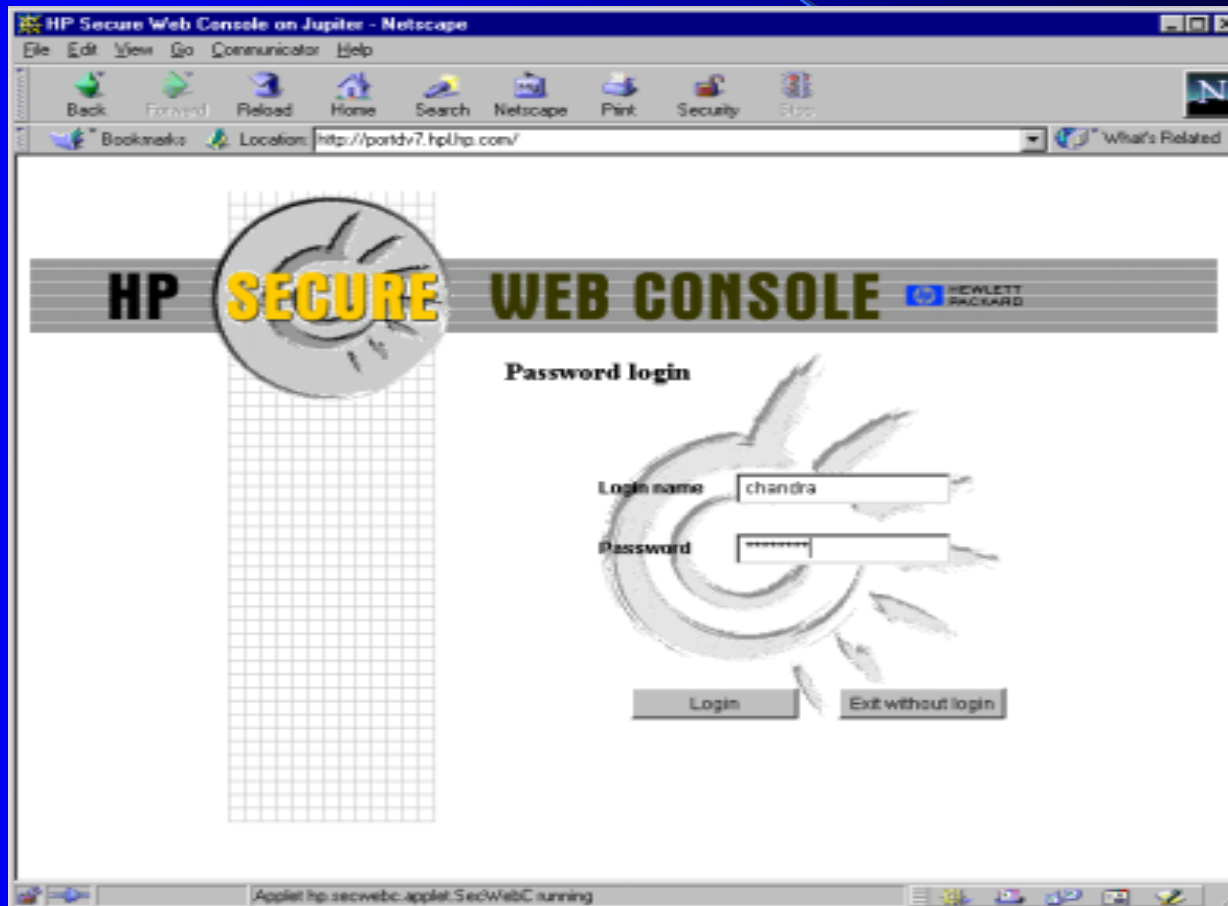
Open up the Emulated "Console"
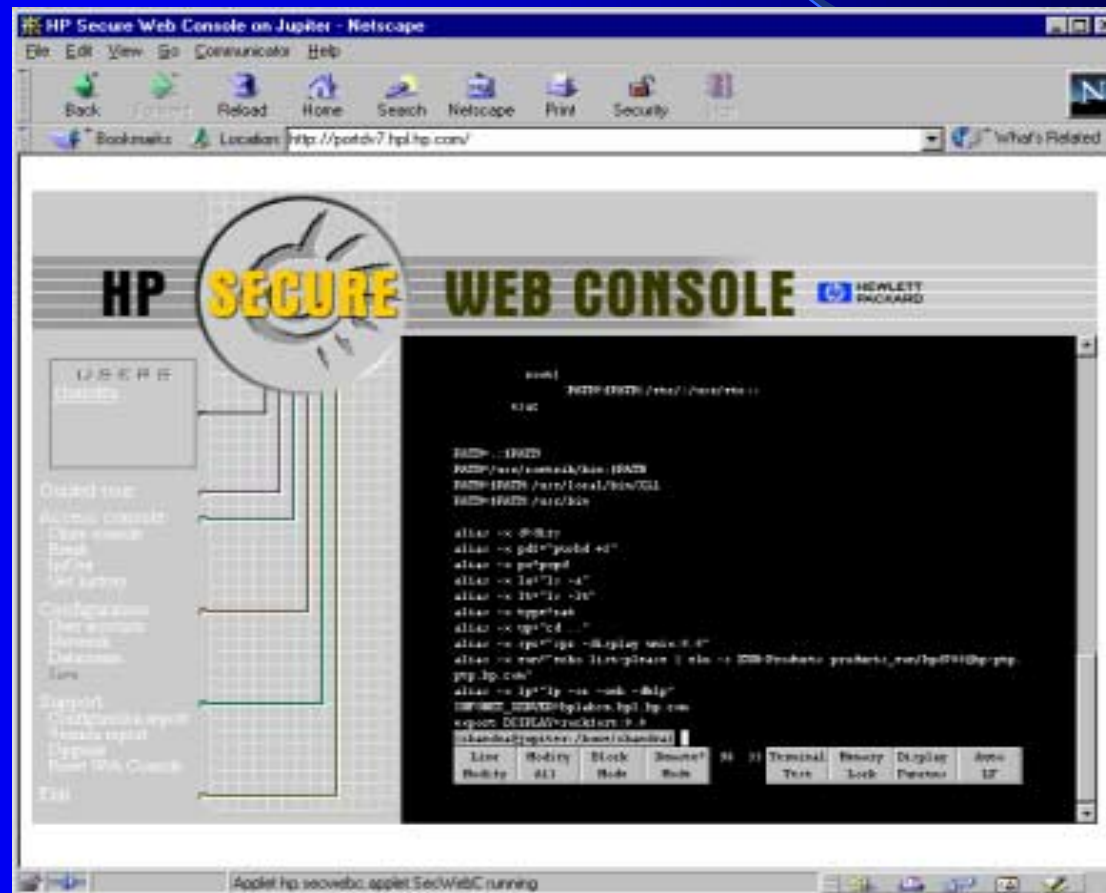
Benefits to Internet-based Remote Access

- Unlike other solutions, no software installations is required on either server or client
- Using the Internet as communications conduit means that the target device can now be accessed from anywhere around the world
- Many HP UX servers can be managed by a smaller set of people
- Can easily provide 24 x 7 support across the globe
- Can tap into experts that maybe located geographically

Conclusions

- Remote console access via the Internet to HP UX servers is an important component of network management

- Internet management appliances provides IT staff with a new cost effective way to manage their networks and extend the ROI on other network management solutions

- Solution like this one is easy to deploy and sets up a framework for larger capabilities – like deploying applications via the management appliance a future reality

Questions