

Welcome

Micro-Servers

with Pluggable Kernel Modules

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Presentation outline

- **Problems faced by developing countries**
- **Demands in IT enabled services**
- **Applications**
- **MicroServers – features**
- **Usability**
- **Pluggable Kernel Modules**
- **Policy and Configuration management**
- **Significance**
- **Conclusion**

Developing countries

- **Huge demand for IT enabled services**
- **Weak infrastructure**
- **Low investment**

Demands – IT enabled services

- **Cheap**
- **Customizable and flexible**
- **Energy efficient**
- **Environment friendly**

Applications

- **Rural education and collaboration**
- **e-Governance – automation, work flow management**
- **Industries – monitoring and control**
- **SOHOs – automation, work flow management, security appliance**
- **Service providers – dedicated machines**

Micro-servers (hardware)

- **are cheap**
- **provide multiple connectivity options**
- **expandable storage options**
- **small size**
- **highly accessible**

Micro-servers - software

Development APIs and control functions

- **POSIX compliant**
- **support for many programming platforms**

User accessible functions

- **high level functions**
- **user restriction**
- **lack of user control**

Usability

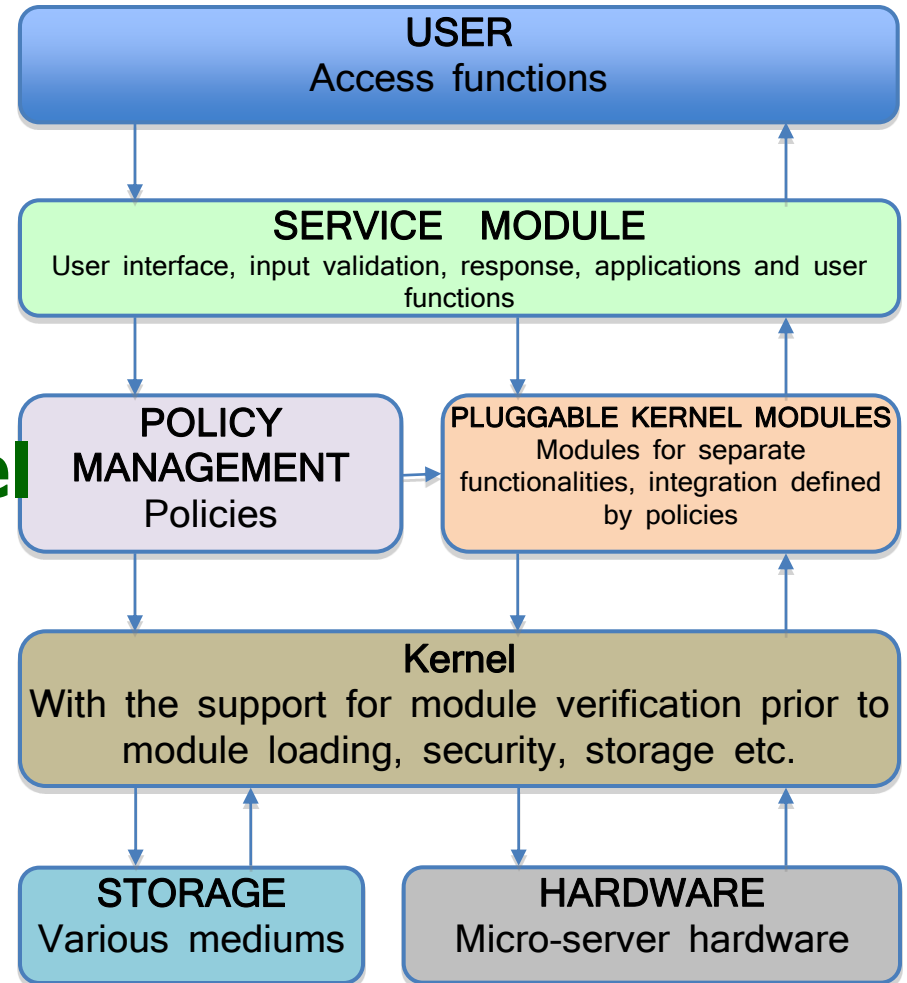
For enhanced usability, micro-servers must;

- i. provide users' control,**
- ii. allow the users to configure their systems at different levels,**
- iii. allow the users to configure the systems in different application mode,**
- iv. provide the best security features and performance optimized configuration even in default mode of operations of the application mode.**
- v. use open standards for configuration management**

Pluggable Kernel Modules

Components

- i. user,
- ii. service module,
- iii. policy management,
- iv. pluggable kernel modules,
- v. kernel,
- vi. storage, and
- vii. hardware



Policy and configuration management

- **Open standards for configuration files (.*cfg*)**
- **Service module working according to the configuration**
- **Policy management**
- **Module validation**

Implementation

- **Physical resources**
 - **Development**
 - **Implementation**
- **Localized contents**
- **Training and awareness**

Significance

- **Complete user control over the configuration**
- **Different modes of operation**
- **Seamless switching between different modes**
- **User confidence even in default mode**
- **Easy configuration migration and sharing**
- **Fast deployment of new policies and software module upgrade**
- **Ease of development for module developers**

Conclusion

- **Cost effective and accessible solution**
- **Extended functionalities**
- **Less carbon production**
- **Green computing**
- **User participation**

Thank you.

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