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# CS3910: Assignment 1: Enterprise Computing and Networking

# Mordred Cameron

# University of Colorado Colorado Springs

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Instructor: Rhett Saunders

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# Introduction to Assignment 1: Enterprise Computing and Networking

In this assignment, the outcome provided insight into the differences of individual and enterprise level computing, specifically the router, the piece of equipment that will be covered in this assignment. This assignment will introduce the defining aspects that make a router enterprise grade, then compare and contrast the differences between a consumer and enterprise grade router, and finally cover the differences in support. The information about the equipment will then be tied back to the lecture slides and readings.

Assignment Results

Based on these screenshots, this is what I learned.

* What makes the piece of equipment enterprise grade? Name 4 key points and discuss.

The important points that make a router enterprise grade are the flexibility in manageability, security, reliability, and the cost and size. With a enterprise grade router, the management and configuration can be more accurately controlled, including load balancing and LAN segmentation. With increased versatility, the level of security can also be managed through VPNs and advanced firewalls. Enterprise grade routers are designed to last much longer than a home router, while consumer routers may experience wear and tear within years, and enterprise grade routers must continue to perform for many years. Lastly, the cost of an enterprise router is significantly more than a consumer router and can support many more connections and a heavier workload (Murphy, 2022). Enterprise grade routers also typically are part of a larger system of varied devices within an infrastructure.

* Compare and contrast the technical aspects of the piece of equipment.

Individual/Consumer Router:

* Supports wireless security
* Limited support for many devices
* 4 ethernet ports
* Usually has basic firewall configurations
* Affordable

A black router with black wires

Description automatically generated

Enterprise Router:

* Multiple forms of integrated service devices, like network, application, and security
* Can have hardware based VPN access
* Highly configurable
* Advanced firewall
* Typically require additional devices for wireless connections
* Designed to function for a very long time
* Wired and wireless options
* Expensive
* Faster

A back of a black electronic device

Description automatically generated

* What is different about support between the two?

Things like security updates and maintenance for home routers tend to be very minimal, most individuals will simply purchase a router and leave it as is. An enterprise router undergoes constant management for functionality and security, these sometimes being either managed by the business themselves, or by 3rd party services (Stuke, 2023).

Conclusion

In summary, while both individual and enterprise routers serve the same purpose, there are notable differences that separate what is classified as an enterprise grade piece of equipment. As covered in the lecture slides for module 1, enterprise computing and equipment value reliability and scalability along with significantly increased costs. In addition, an enterprise system will certainly have more devices that make up the network on top of the router that perform their respective tasks. Unlike the enterprise router, a home router is a sort of all-in-one that is rarely updated or maintained.

References

Murphy, D. (2022, September 16). *Business router vs home router – what’s the difference?* ITI Technical College. https://iticollege.edu/blog/business-router-vs-home-router-whats-the-difference/

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