**White Paper: Operating System Comparisons for Application Deployment**

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**1. Executive Summary**

This white paper aims to evaluate various operating systems for deploying our application. We will compare three major operating systems: Windows, macOS, and Linux. After analyzing these systems, we will recommend the most suitable operating system for our application deployment.

* **Purpose**: To identify the best operating system for application deployment.
* **Problem**: Choosing the right OS is crucial for optimizing performance and ensuring compatibility with application requirements.
* **Recommendation**: A detailed analysis will lead to a recommendation for the best operating system.

**2. Problem Statement**

Selecting an operating system for application deployment can significantly impact performance, security, and overall user experience. Different operating systems have unique features, support structures, and compatibility requirements that can either enhance or hinder application functionality. Therefore, understanding which OS to choose is essential for development.

**3. Criteria for Evaluation**

The following criteria will be used to evaluate each operating system:

* **Market Share:** The percentage of market the OS has.
* **Performance:** How efficiently the OS runs applications.
* **Ease of Integration**: Compatibility with existing systems and software.
* **Security**: Built-in security features and overall vulnerability management.

**4. Overview of Solutions**

**Solution 1: Windows**

* **Description**: Windows is a widely used operating system known for its user-friendly interface and extensive application support. It is particularly popular in enterprise environments.

**Solution 2: macOS**

* **Description**: macOS is the operating system for Apple's computers. Known for its high performance and security features, it is favored in creative industries.

**Solution 3: Linux**

* **Description**: Linux is an open-source operating system that offers flexibility and customization. It is commonly used in server environments due to its robustness and security features.

**5. Comparative Analysis**

| **Criteria** | **Windows** | **MacOS** | **Linux** |
| --- | --- | --- | --- |
| **Market Share** | %25.61 | %18.39 | %1.64 |
| **Performance** | Best | Better | Good |
| **Ease of Integration** | Best | Better | Good |
| **Security** | Good | Better | Best |

**6. Recommendation**

**Recommended Solution**: Windows

**Justification**: Windows has a predominate market share and shows the best performance and ease of integration. Windows leads in ¾ of the criteria listed above.

**7. Implementation Plan**

We should develop our product to function best on windows machines while not forgetting about MacOS and Linux. Our focus will be on Windows but if issues are found and can be resolved with our application running on other operating systems they should be resolved.

**8. Conclusion**

In conclusion, selecting the appropriate operating system is critical for successful application deployment. Focus should be placed on developing for a successful windows application but running on MacOS and Linux should not be completely forgotten.

**References**

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