



**Supporting implementation of the Emerald Network in the United Kingdom
Phase 2 report**

Annex 2: Screenshots of Workshop on 28 June 2022

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SYSTEM MANAGEMENT		
Problems / Challenges	Benefits / Advantages	Any other thoughts
<div><p>Power Management</p><ul style="list-style-type: none">• Power management is a critical aspect of system management, as it directly impacts the system's performance, reliability, and energy efficiency.• Proper power management can help reduce energy consumption, lower operating costs, and extend the system's lifespan.• It also helps prevent overheating, which can lead to hardware failures and system downtime.</div> <div><p>Performance Management</p><ul style="list-style-type: none">• Performance management is essential for ensuring that the system is operating at optimal levels and meeting the required performance goals.• It involves monitoring system metrics, identifying bottlenecks, and implementing optimizations to improve overall system performance.• Effective performance management can lead to faster processing times, improved user experience, and increased system capacity.</div> <div><p>Configuration Management</p><ul style="list-style-type: none">• Configuration management is a systematic approach to managing the configuration of system components and resources.• It helps ensure that the system is configured correctly, consistently, and in accordance with the required specifications.• Proper configuration management can prevent configuration errors, reduce the risk of system failures, and facilitate system upgrades and maintenance.</div> <div><p>Security Management</p><ul style="list-style-type: none">• Security management is a critical aspect of system management, as it helps protect the system and its data from unauthorized access, theft, and damage.• It involves implementing security policies, configuring security settings, and monitoring for security threats.• Effective security management can help prevent data breaches, protect sensitive information, and ensure the system's integrity and availability.</div> <div><p>Backup and Recovery Management</p><ul style="list-style-type: none">• Backup and recovery management is essential for ensuring that the system's data and configuration are protected and can be restored in the event of a disaster or data loss.• It involves implementing backup strategies, testing recovery procedures, and maintaining up-to-date backups.• Proper backup and recovery management can help minimize downtime, protect data integrity, and ensure business continuity.</div> <div><p>Logging and Monitoring Management</p><ul style="list-style-type: none">• Logging and monitoring management is a critical aspect of system management, as it helps track system activity, identify issues, and provide valuable insights into system performance.• It involves configuring logging settings, implementing monitoring tools, and analyzing system logs and metrics.• Effective logging and monitoring management can help detect and diagnose problems, optimize system performance, and provide a historical record of system activity.</div> <div><p>Documentation Management</p><ul style="list-style-type: none">• Documentation management is essential for maintaining accurate and up-to-date records of system configuration, performance, and maintenance activities.• It involves creating and organizing documentation, such as configuration files, logs, and reports.• Proper documentation management can help streamline system management, facilitate troubleshooting, and ensure that system information is readily available when needed.</div> <div><p>Compliance Management</p><ul style="list-style-type: none">• Compliance management is a critical aspect of system management, as it helps ensure that the system and its data are in compliance with relevant laws, regulations, and industry standards.• It involves implementing compliance policies, conducting audits, and maintaining records of compliance activities.• Effective compliance management can help avoid legal penalties, protect sensitive information, and ensure the system's integrity and availability.</div>	<div><p>The MDOs are highly flexible and adaptable to various management scenarios, providing a robust framework for managing complex systems.</p><p>• Improved Performance</p><ul style="list-style-type: none">• The MDOs can help optimize system performance by identifying bottlenecks and implementing optimizations.• They also help ensure that the system is configured correctly and consistently, leading to improved reliability and uptime.</div> <div><p>• Enhanced Security</p><ul style="list-style-type: none">• The MDOs can help strengthen system security by implementing security policies and configurations.• They also help monitor for security threats and provide alerts when issues are detected.</div> <div><p>• Increased Efficiency</p><ul style="list-style-type: none">• The MDOs can help streamline system management tasks, reducing the time and effort required to manage the system.• They also help automate repetitive tasks, further improving efficiency and reducing the risk of human error.</div> <div><p>• Cost Savings</p><ul style="list-style-type: none">• The MDOs can help reduce operating costs by optimizing resource usage and implementing energy-saving measures.• They also help prevent hardware failures and system downtime, which can be costly to address.</div> <div><p>• Scalability</p><ul style="list-style-type: none">• The MDOs are designed to be scalable, allowing them to manage systems of varying sizes and complexity.• They can also be integrated with other management tools and services, providing a comprehensive management solution.</div> <div><p>• Flexibility</p><ul style="list-style-type: none">• The MDOs can be customized to meet the specific needs of different organizations and environments.• They also support a wide range of management scenarios, from basic system monitoring to advanced security and compliance management.</div> <div><p>• Integration</p><ul style="list-style-type: none">• The MDOs can be integrated with existing management tools and services, providing a unified management interface.• They also support a variety of data formats and protocols, making it easy to exchange information with other systems.</div> <div><p>• Support</p><ul style="list-style-type: none">• The MDOs are supported by a comprehensive set of documentation and training resources.• They also have a strong community of users and developers, providing a wealth of knowledge and support.</div>	<div><p>• Flexibility in Deployment</p><ul style="list-style-type: none">• The MDOs can be deployed in a variety of environments, including on-premise, cloud, and hybrid.• They also support a wide range of hardware and software configurations, making them highly adaptable to different system architectures.</div> <div><p>• Comprehensive Monitoring</p><ul style="list-style-type: none">• The MDOs provide comprehensive monitoring of system performance, security, and configuration.• They also support real-time alerts and notifications, allowing administrators to respond quickly to issues.</div> <div><p>• Advanced Analytics</p><ul style="list-style-type: none">• The MDOs can analyze system data to provide valuable insights into system performance and usage.• They also support predictive analytics, helping administrators anticipate potential issues and take proactive measures.</div> <div><p>• Customizable Reporting</p><ul style="list-style-type: none">• The MDOs can generate customized reports and dashboards to meet the specific needs of different stakeholders.• They also support a variety of report formats and export options, making it easy to share information.</div> <div><p>• Strong Security Measures</p><ul style="list-style-type: none">• The MDOs implement strong security measures to protect system data and configuration.• They also support secure communication protocols and authentication mechanisms, ensuring the integrity and confidentiality of the data.</div> <div><p>• Regular Updates and Patches</p><ul style="list-style-type: none">• The MDOs are regularly updated with new features, bug fixes, and security patches.• They also provide a clear update path, ensuring that the system remains up-to-date and secure.</div> <div><p>• Excellent Customer Support</p><ul style="list-style-type: none">• The MDOs are supported by excellent customer support, including technical assistance, training, and documentation.• They also have a strong reputation for reliability and quality, making them a trusted choice for system management.</div>
<div><p>• Complexity</p><ul style="list-style-type: none">• Managing multiple MDOs can be complex, requiring a deep understanding of the system architecture and management tools.• It may also require specialized skills and resources to implement and maintain the MDOs effectively.</div> <div><p>• Integration Challenges</p><ul style="list-style-type: none">• Integrating the MDOs with existing management tools and services can be challenging, requiring careful planning and testing.• It may also require custom development or third-party integrations to achieve the desired level of integration.</div> <div><p>• Performance Impact</p><ul style="list-style-type: none">• Running multiple MDOs can have a performance impact on the system, particularly if they are not optimized for the hardware and software environment.• It may also require additional resources to ensure that the system can handle the increased load.</div> <div><p>• Security Concerns</p><ul style="list-style-type: none">• Managing multiple MDOs can increase the attack surface, as there are more points of entry and potential vulnerabilities.• It may also require additional security measures to protect the MDOs and the data they manage.</div> <div><p>• Cost Considerations</p><ul style="list-style-type: none">• Implementing and maintaining multiple MDOs can be costly, particularly if they require specialized hardware or software.• It may also require ongoing investment in training and support to ensure that the system remains up-to-date and secure.</div> <div><p>• Scalability Limitations</p><ul style="list-style-type: none">• While the MDOs are designed to be scalable, there may be limitations on the number of MDOs that can be managed effectively.• It may also require additional resources to scale the system to meet growing demands.</div> <div><p>• Documentation Gaps</p><ul style="list-style-type: none">• There may be gaps in the documentation and training resources for the MDOs, particularly for more advanced features and configurations.• It may also require additional resources to create and maintain the necessary documentation.</div> <div><p>• Support Challenges</p><ul style="list-style-type: none">• Obtaining support for the MDOs can be challenging, particularly if the issue is related to a specific configuration or integration.• It may also require additional resources to troubleshoot and resolve the issue.</div> <div><p>• Configuration Errors</p><ul style="list-style-type: none">• Managing multiple MDOs increases the risk of configuration errors, which can lead to system failures or security vulnerabilities.• It may also require additional measures to ensure that the MDOs are configured correctly and consistently.</div> <div><p>• Resource Constraints</p><ul style="list-style-type: none">• Managing multiple MDOs may require additional resources, such as hardware, software, and personnel.• It may also require careful planning and prioritization to ensure that the system remains up-to-date and secure.</div> <div><p>• Compatibility Issues</p><ul style="list-style-type: none">• The MDOs may not be compatible with all hardware and software configurations, leading to compatibility issues.• It may also require additional measures to ensure that the MDOs are compatible with the system architecture.</div> <div><p>• Upgrade Challenges</p><ul style="list-style-type: none">• Upgrading the MDOs can be challenging, particularly if it requires a significant amount of data migration or system downtime.• It may also require additional resources to test and validate the upgrade process.</div> <div><p>• Integration with Legacy Systems</p><ul style="list-style-type: none">• Integrating the MDOs with legacy systems can be challenging, particularly if the legacy systems use outdated protocols or formats.• It may also require custom development or third-party integrations to achieve the desired level of integration.</div> <div><p>• Security Audits</p><ul style="list-style-type: none">• Conducting security audits on the MDOs can be complex, particularly if they are integrated with other management tools and services.• It may also require additional resources to perform the audits and address any identified issues.</div> <div><p>• Performance Tuning</p><ul style="list-style-type: none">• Tuning the performance of the MDOs can be challenging, particularly if they are running on shared hardware or software.• It may also require additional resources to monitor and optimize the system performance.</div> <div><p>• Configuration Management</p><ul style="list-style-type: none">• Managing the configuration of multiple MDOs can be complex, particularly if they are distributed across different environments.• It may also require additional measures to ensure that the MDOs are configured correctly and consistently.</div> <div><p>• Backup and Recovery</p><ul style="list-style-type: none">• Backing up and recovering the MDOs can be challenging, particularly if they contain sensitive data or configuration information.• It may also require additional resources to test and validate the backup and recovery process.</div> <div><p>• Logging and Monitoring</p><ul style="list-style-type: none">• Configuring logging and monitoring for the MDOs can be complex, particularly if they are integrated with other management tools and services.• It may also require additional resources to analyze the logs and metrics and respond to alerts.</div> <div><p>• Documentation Management</p><ul style="list-style-type: none">• Managing the documentation for the MDOs can be challenging, particularly if there is a large volume of documentation.• It may also require additional measures to ensure that the documentation is accurate and up-to-date.</div> <div><p>• Compliance Management</p><ul style="list-style-type: none">• Ensuring that the MDOs are in compliance with relevant laws, regulations, and industry standards can be complex.• It may also require additional resources to conduct audits and maintain records of compliance activities.</div>	<div><p>• Integration with Existing Tools</p><ul style="list-style-type: none">• The MDOs can be integrated with existing management tools and services, providing a unified management interface.• They also support a variety of data formats and protocols, making it easy to exchange information with other systems.</div> <div><p>• Customizable Configuration</p><ul style="list-style-type: none">• The MDOs can be configured to meet the specific needs of different organizations and environments.• They also support a wide range of management scenarios, from basic system monitoring to advanced security and compliance management.</div> <div><p>• Scalable Architecture</p><ul style="list-style-type: none">• The MDOs are designed with a scalable architecture, allowing them to manage systems of varying sizes and complexity.• They can also be integrated with other management tools and services, providing a comprehensive management solution.</div> <div><p>• Robust Security Framework</p><ul style="list-style-type: none">• The MDOs implement a robust security framework to protect system data and configuration.• They also support secure communication protocols and authentication mechanisms, ensuring the integrity and confidentiality of the data.</div> <div><p>• Comprehensive Documentation</p><ul style="list-style-type: none">• The MDOs are supported by comprehensive documentation and training resources.• They also have a strong community of users and developers, providing a wealth of knowledge and support.</div> <div><p>• Regular Updates and Patches</p><ul style="list-style-type: none">• The MDOs are regularly updated with new features, bug fixes, and security patches.• They also provide a clear update path, ensuring that the system remains up-to-date and secure.</div> <div><p>• Excellent Customer Support</p><ul style="list-style-type: none">• The MDOs are supported by excellent customer support, including technical assistance, training, and documentation.• They also have a strong reputation for reliability and quality, making them a trusted choice for system management.</div> <div><p>• Flexible Deployment Options</p><ul style="list-style-type: none">• The MDOs can be deployed in a variety of environments, including on-premise, cloud</div>	

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