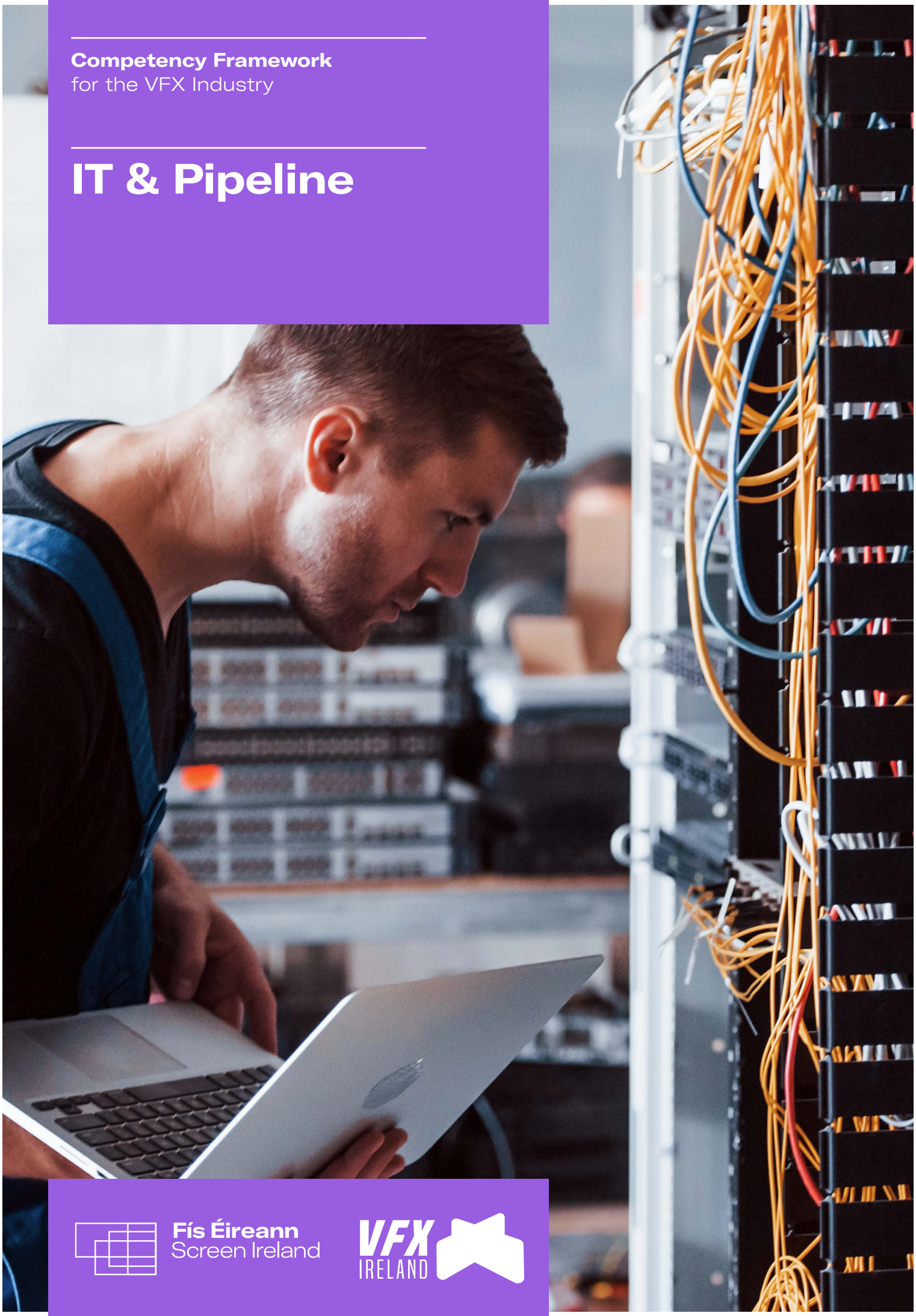
Competency Framework
for the VFX Industry

IT & Pipeline



Fís Éireann
Screen Ireland

VFX
IRELAND

IT & Pipeline

Roles

Data Manager

Role Summary:

A Data Manager in the VFX industry is responsible for overseeing the organisation, storage, security, and integrity of digital assets and data used in the production of visual effects projects. They collaborate with various teams to ensure efficient data workflows, implement best practices for data management, and adhere to industry standards and compliance regulations.

Key Tasks:

1. Managing and organising digital assets and data repositories
2. Implementing data backup and recovery solutions
3. Monitoring data storage systems and optimising performance
4. Enforcing data security measures and access controls
5. Developing and maintaining data management policies and procedures
6. Managing data storage systems and implementing archival strategies
7. Ensuring data integrity and overseeing data compliance measures

Task statements

Key Task 1:

Managing and organising digital assets and data repositories

Associated activities

- ✓ Establishing file naming conventions and directory structures for organising digital assets
- ✓ Tagging and categorising assets to facilitate search and retrieval processes
- ✓ Collaborating with production teams to identify data requirements and project dependencies
- ✓ Tracking and documenting metadata associated with digital assets, including version history and usage rights

Key Task 2:

Implementing data backup and recovery solutions

Associated activities

- ✓ Designing and configuring backup schedules and retention policies to protect against data loss
- ✓ Automating backup processes and performing regular backup testing to ensure data recoverability
- ✓ Monitoring backup logs and alerts to identify and address backup failures or errors promptly
- ✓ Developing disaster recovery plans and procedures to minimise downtime and data loss in the event of system failures or disasters

Key Task 3:

Monitoring data storage systems and optimising performance

Associated activities

- ✓ Monitoring storage capacity, usage trends, and performance metrics to identify potential bottlenecks or issues
- ✓ Conducting regular performance tuning and optimisation activities, such as data deduplication and compression
- ✓ Scaling storage infrastructure to accommodate growing data volumes and changing project requirements
- ✓ Collaborating with IT teams to troubleshoot and resolve storage-related issues and outages

Key Task 4:

Enforcing data security measures and access controls

Associated activities

- ✓ Implementing role-based access controls (RBAC) and permissions management to restrict unauthorised access to sensitive data
- ✓ Conducting regular security audits and vulnerability assessments to identify and mitigate security risks
- ✓ Encrypting data at rest and in transit to protect against unauthorised interception or tampering
- ✓ Training staff on security best practices and raising awareness of potential security threats and vulnerabilities

Key Task 5:

Developing and maintaining data management policies and procedures

Associated activities

- ✓ Drafting and updating data management policies, standards, and guidelines in alignment with industry best practices and compliance requirements
- ✓ Communicating data management policies and procedures to relevant stakeholders and ensuring adherence to established protocols
- ✓ Documenting data workflows, procedures, and standards to facilitate knowledge sharing and training
- ✓ Conducting regular reviews and audits of data management practices to ensure compliance and identify areas for improvement

Key Task 6:

Managing data storage systems and implementing archival strategies

Associated activities

- ✓ Evaluating and selecting appropriate storage solutions based on performance, capacity, and cost considerations
- ✓ Designing and implementing data storage architectures, including SAN, NAS, and cloud- based storage solutions
- ✓ Developing and maintaining data archival policies and procedures to ensure long-term preservation and accessibility of critical VFX assets
- ✓ Managing data migration projects to transfer data between storage systems or archival media while minimising downtime and data loss

Key Task 7:

Ensuring data integrity and overseeing data compliance measures

Associated activities

- ✓ Implementing data quality assurance processes to ensure the accuracy, consistency, and completeness of VFX data assets
- ✓ Establishing data governance frameworks and policies to enforce data standards, security protocols, and access controls
- ✓ Conducting regular data audits and compliance assessments to identify and remediate data security risks, privacy violations, and regulatory non-compliance
- ✓ Collaborating with legal and compliance teams to ensure adherence to industry regulations, such as GDPR, CCPA, and MPAA guidelines

Competencies Required

Core Competencies	Technical Competencies		Leadership Competencies	Personal Development Competencies
Adaptability to Change	VFX Pipeline		Leading Teams	Continuous Learning and Improvement
Communication	VFX Software Suites		Managing Budgets	Industry Knowledge
Decision Making	Knowledge of Photography and Cinematography		Managing People	Managing Self & Resilience (Wellbeing)
Managing Deadlines	Rigging		Mentoring and Coaching	Self-Awareness
Problem Solving	2D	Compositing Software	Strategic Thinking	Working as a Freelancer/ Self-Employed
Quality Oriented	3D	Digital Sculpting Software	Working Inclusively	Working Under Pressure
Time, Task and Resource Management	3D	Lighting Techniques		
Working Collaboratively	3D	Rendering Engines		
Working Independently	3D	Shading and Material Creation		
	3D	Texture Mapping		
	3D	3D Modelling and Animation Software		
	3D	Groom Techniques		

Data Technician

Role Summary:

A Data Technician manages and organises digital assets, ensuring data integrity, and supporting the technical infrastructure of a VFX studio. They work closely with production teams to facilitate the efficient flow of data throughout the production pipeline.

Note: Within certain studios there may be two separate roles related to data: Data Technician and Data Wrangler. However these roles do have overlap and may often be combined.

Key Tasks:

1. Managing digital assets and data storage systems
2. Performing data transfers and backups
3. Providing technical support for data-related issues
4. Collaborating with production teams to optimise data workflows
5. Maintaining data security protocols
6. Troubleshooting and resolving data-related problems
7. Documenting data management processes and procedures

Task statements

Key Task 1:

Managing digital assets and data storage systems

Associated activities

- ✓ Organising and cataloguing digital assets, including 3D models, textures, animations, and renders
- ✓ Creating and maintaining directory structures and naming conventions for efficient asset management
- ✓ Ensuring proper version control and file naming consistency across projects
- ✓ Collaborating with artists and supervisors to track asset dependencies and revisions
- ✓ Monitoring storage capacity and optimising storage solutions to accommodate project requirements

Key Task 2:

Performing data transfers and backups

Associated activities

- ✓ Transferring data between different systems and locations using network protocols and file transfer tools
- ✓ Scheduling and executing regular backups of critical project data to safeguard against data loss
- ✓ Verifying the integrity of backup files and conducting periodic restore tests to ensure data recoverability
- ✓ Managing data archiving and retrieval processes for long-term storage and compliance purposes
- ✓ Implementing data compression and encryption techniques to optimise transfer speed and protect sensitive information

Key Task 3:

Providing technical support for data-related issues

Associated activities

- ✓ Responding to user inquiries and troubleshooting data-related problems in a timely manner
- ✓ Collaborating with IT and software development teams to resolve software compatibility issues and system errors
- ✓ Assisting users with data recovery and restoration procedures in the event of data loss or corruption
- ✓ Conducting performance analysis and optimisation for data storage and retrieval systems
- ✓ Providing training and guidance to users on data management best practices and tools

Key Task 4:

Collaborating with production teams to optimise data workflows

Associated activities

- ✓ Participating in production meetings to understand project requirements and workflow dependencies
- ✓ Identifying opportunities for streamlining data workflows and improving productivity
- ✓ Developing custom scripts and automation tools to automate repetitive data management tasks
- ✓ Implementing workflow enhancements and integrations between different software applications
- ✓ Conducting regular reviews and audits of data workflows to identify areas for improvement

Key Task 5:

Maintaining data security protocols

Associated activities

- ✓ Implementing and enforcing data security policies and procedures to protect sensitive information
- ✓ Configuring access controls and permissions for data storage systems and repositories
- ✓ Monitoring user activity and auditing access logs to detect and prevent unauthorised access
- ✓ Conducting regular security assessments and vulnerability scans to identify potential risks
- ✓ Collaborating with IT security teams to remediate security vulnerabilities and ensure compliance with industry standards

Key Task 6:

Troubleshooting and resolving data-related problems

Associated activities

- ✓ Diagnosing root causes of data errors, inconsistencies, and performance issues
- ✓ Implementing corrective actions and preventive measures to address data quality issues
- ✓ Escalating complex technical issues to senior data technicians or IT specialists for resolution
- ✓ Documenting troubleshooting steps and resolutions for future reference and knowledge sharing

Key Task 7:

Documenting data management processes and procedures

Associated activities

- ✓ Creating and maintaining documentation for data management processes, procedures, and workflows
- ✓ Developing training materials and user guides for new data management tools and technologies
- ✓ Updating documentation to reflect changes in data management policies and procedures
- ✓ Conducting regular reviews and audits of documentation to ensure accuracy and completeness
- ✓ Providing training and support to users on how to access and use data management documentation

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Data Wrangler

Role Summary:

The Data Wrangler is responsible for managing and organising all data generated during the VFX production process, ensuring that it is accurately captured, securely stored, and efficiently transferred between departments. This role involves handling large volumes of media files, managing metadata, and ensuring that all data is available for the post-production team.

Note: This role is closely associated with on-set activities, working directly with the production crew to manage data in real-time as it is generated. See also Data Technician

Key Tasks:

1. Manage data transfers and storage
2. Oversee data logging and tracking
3. Collaborate with production and post-production teams
4. Maintain equipment and systems
5. Provide training and mentorship
6. Ensure data integrity and security

Task statements

Key Task 1:

Manage data transfers and storage

Associated activities

- ✓ Manage the transfer of footage and other media files from cameras and on-set storage devices to secure, long-term storage solutions
- ✓ Perform checks to ensure the integrity and completeness of all data transfers, addressing any issues immediately
- ✓ Organise and archive media files systematically, ensuring they are easily accessible for post-production teams
- ✓ Create and manage multiple backups of critical data, following best practices for data redundancy and security

Key Task 2:

Oversee data logging and tracking

Associated activities

- ✓ Keep detailed logs of all data transfers, including metadata, file formats, and storage locations, ensuring accurate tracking throughout the production
- ✓ Monitor and track the use of data across departments, ensuring that all assets are accounted for and available as needed
- ✓ Ensure that all metadata associated with media files is accurate, complete, and updated regularly to facilitate efficient searching and retrieval
- ✓ Produce regular reports on data status, including any issues or discrepancies, and present these to the production team

Key Task 3:

Collaborate with production and post-production teams

Associated activities

- ✓ Work closely with camera crews, VFX teams, and other departments to ensure that data is captured and transferred according to the project's workflow
- ✓ Oversee the handover of data to post-production teams, ensuring that all files are correctly organised and delivered on time
- ✓ Ensure that data wrangling processes integrate smoothly with the overall production and post-production workflows, minimising disruptions
- ✓ Provide support during dailies and review sessions by preparing and managing data for viewing and feedback

Key Task 4:

Maintain equipment and systems

Associated activities

- ✓ Regularly check and maintain data wrangling equipment, including storage devices, transfer systems, and computers, to ensure optimal performance
- ✓ Set up and manage data wrangling workstations on set and in the production office, ensuring all necessary tools are available and functional
- ✓ Oversee the management of storage solutions, ensuring that sufficient capacity is available and data is stored securely Ensure that all data is protected by appropriate security measures, including encryption, password protection, and secure storage environments

Key Task 5:

Provide training and mentorship

Associated activities

- ✓ Provide training and mentorship to Junior/Assistant Data Wranglers, helping them develop their skills and understanding of data management in VFX
- ✓ Share knowledge of best practices and industry standards with the team, ensuring consistent and high-quality data management
- ✓ Monitor the performance of the data wrangling team, providing feedback and guidance to improve efficiency and accuracy
- ✓ Encourage continuous learning and professional development within the team, supporting attendance at workshops, courses, and industry events

Key Task 6:

Ensure Data Integrity and Security

Associated activities

- ✓ Ensure that all data wrangling activities adhere to industry best practices for data integrity, security, and accessibility
- ✓ Continuously monitor the integrity of data throughout the production process, implementing checks and safeguards to prevent loss or corruption
- ✓ Perform regular audits of data storage and management practices, identifying and addressing any potential vulnerabilities
- ✓ Develop and implement contingency plans for data recovery in the event of technical failures or other emergencies

Competencies Required

Core Competencies	Technical Competencies		Leadership Competencies	Personal Development Competencies
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Working Independently	3D	Shading and Material Creation		
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	3D	3D Modelling and Animation Software		
	3D	Groom Techniques		

Junior/Assistant Data Wrangler

Role Summary:

The Junior/Assistant Data Wrangler is an entry-level role responsible for supporting the Data Wrangler in managing and organising data on set and throughout the VFX production process. This role involves handling a variety of tasks related to data management, including transferring, backing up, and logging media files. The Junior/Assistant Data Wrangler ensures that all data is accurately recorded and safely stored, contributing to the smooth operation of the VFX pipeline.

Key Tasks:

1. Support data transfer and management
2. Log and track data
3. Collaborate with production and post-production teams
4. Maintain equipment and storage systems
5. Learn and develop skills

Task statements

Key Task 1:

Support data transfer and management

Associated activities

- ✓ Help transfer footage and other media files from cameras and storage devices to secure storage systems
- ✓ Verify the integrity of transferred data by checking file sizes, formats, and ensuring successful transfers
- ✓ Ensure that all files are correctly named, organised, and stored according to the project's file management protocol
- ✓ Assist in creating backups of critical data to ensure its safety and accessibility throughout the production process

Key Task 2:

Log and track data

Associated activities

- ✓ Record detailed logs of all data transfers, noting file names, sizes, and storage locations for future reference
- ✓ Monitor and track the usage of data throughout the production process, ensuring that all assets are accounted for
- ✓ Assist in updating and managing metadata associated with media files, ensuring that all information is accurate and complete
- ✓ Report any issues or discrepancies in data to the Data Wrangler or relevant team members for resolution

Key Task 3:

Collaborate with production and post-production teams

Associated activities

- ✓ Work closely with the camera crew and VFX team to ensure that data is captured and transferred according to production schedules
- ✓ Help prepare and hand over data to post-production teams, ensuring that all files are correctly organised and ready for use
- ✓ Relay any data-related instructions or information between departments to ensure smooth workflow and prevent delays
- ✓ Attend dailies or review sessions, providing support in accessing and organising data as needed

Key Task 4:

Maintain equipment and storage systems

Associated activities

- ✓ Regularly check and maintain data wrangling equipment, including storage devices, computers, and backup systems, to ensure they are in good working condition
- ✓ Assist in setting up data wrangling workstations on set or in the production office, ensuring all necessary tools and systems are in place
- ✓ Monitor storage capacity and usage, alerting the Data Wrangler or production team when additional storage is required
- ✓ Follow security protocols to protect data from loss, theft, or corruption

Key Task 5:

Learn and Develop Skills

Associated activities

- ✓ Participate in on-the-job training to learn the best practices and techniques of data wrangling in the VFX industry
- ✓ Stay informed about industry standards for data management and wrangling, applying this knowledge to daily tasks
- ✓ Regularly seek feedback from the Data Wrangler and other team members to improve skills and performance
- ✓ Pursue opportunities for continuous learning, such as attending workshops or taking online courses relevant to data wrangling

Competencies Required

Core Competencies	Technical Competencies		Leadership Competencies	Personal Development Competencies
Adaptability to Change	VFX Pipeline		Leading Teams	Continuous Learning and Improvement
Communication	VFX Software Suites		Managing Budgets	Industry Knowledge
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Managing Deadlines	Rigging		Mentoring and Coaching	Self-Awareness
Problem Solving	2D	Compositing Software	Strategic Thinking	Working as a Freelancer/ Self-Employed
Quality Oriented	3D	Digital Sculpting Software	Working Inclusively	Working Under Pressure
Time, Task and Resource Management	3D	Lighting Techniques		
Working Collaboratively	3D	Rendering Engines		
Working Independently	3D	Shading and Material Creation		
	3D	Texture Mapping		
	3D	3D Modelling and Animation Software		
	3D	Groom Techniques		

Pipeline Architect

Role Summary:

A Pipeline Architect designs and develops the technical infrastructure and workflows that support the creation of visual effects (VFX) in the film, television, and gaming industries. They are responsible for designing efficient and scalable pipelines that facilitate collaboration among artists, streamline production processes, and ensure the timely delivery of high-quality VFX assets.

Key Tasks:

1. Designing and developing the technical infrastructure for VFX production pipelines
2. Creating tools and scripts to automate repetitive tasks and enhance workflow efficiency
3. Collaborating with department heads and technical leads to gather requirements and define pipeline specifications
4. Conducting research and development to identify and implement new technologies and best practices
5. Providing technical support and troubleshooting assistance to artists and production teams
6. Ensuring compliance with industry standards and security protocols in pipeline development
7. Mentoring and training junior pipeline developers and technical artists

Task statements

Key Task 1:

Designing and developing the technical infrastructure for VFX production pipelines

Associated activities

- ✓ Analysing production requirements and workflow needs to design scalable and efficient pipeline architectures
- ✓ Creating technical documentation, diagrams, and flowcharts to illustrate pipeline design and functionality
- ✓ Collaborating with system administrators and IT professionals to provision and configure hardware and software resources
- ✓ Implementing version control systems and asset management solutions to track changes and maintain data integrity
- ✓ Conducting performance testing and optimisation to ensure the reliability and efficiency of pipeline infrastructure
- ✓ Integrating third-party software and tools into the pipeline ecosystem to enhance functionality and interoperability

Key Task 2:

Creating tools and scripts to automate repetitive tasks and enhance workflow efficiency

Associated activities

- ✓ Identifying opportunities for automation and process improvement through workflow analysis and stakeholder feedback
- ✓ Writing custom scripts and plugins using programming languages such as Python, C++, and MEL to automate repetitive tasks and streamline workflows
- ✓ Developing user-friendly interfaces and tools to facilitate the adoption of automation solutions by artists and production teams
- ✓ Conducting usability testing and gathering feedback to iteratively refine and improve automation tools and scripts
- ✓ Documenting code and providing technical documentation and training materials to support the adoption of automation solutions

Key Task 3:

Collaborating with department heads and technical leads to gather requirements and define pipeline specifications

Associated activities

- ✓ Work closely with the camera crew and VFX team to ensure that data is captured and transferred according to production schedules
- ✓ Help prepare and hand over data to post-production teams, ensuring that all files are correctly organised and ready for use
- ✓ Relay any data-related instructions or information between departments to ensure smooth workflow and prevent delays
- ✓ Attend dailies or review sessions, providing support in accessing and organising data as needed

Key Task 4:

Conducting research and development to identify and implement new technologies and best practices

Associated activities

- ✓ Staying informed about emerging technologies, industry trends, and best practices in VFX production and pipeline development
- ✓ Conducting research and experimentation to evaluate new tools, technologies, and methodologies for potential adoption
- ✓ Collaborating with vendors, industry partners, and academic institutions to explore and pilot new technologies and workflows
- ✓ Participating in conferences, workshops, and online forums to share knowledge, exchange ideas, and network with peers in the VFX community
- ✓ Documenting research findings and best practices and disseminating knowledge to internal teams through presentations, training sessions, and documentation

Key Task 5:

Providing technical support and troubleshooting assistance to artists and production teams

Associated activities

- ✓ Monitoring pipeline performance and health using monitoring tools and logging systems to proactively identify and address issues
- ✓ Providing timely technical support and troubleshooting assistance to artists and production teams to resolve pipeline-related issues and minimise downtime
- ✓ Documenting support requests, troubleshooting steps, and resolutions to build a knowledge base and facilitate future issue resolution
- ✓ Collaborating with software developers and system administrators to investigate and resolve complex technical issues and escalations
- ✓ Communicating effectively with stakeholders to manage expectations and provide regular updates on issue resolution progress

Key Task 6:

Ensuring compliance with industry standards and security protocols in pipeline development

Associated activities

- ✓ Conducting regular audits and assessments to ensure compliance with industry standards, best practices, and security protocols
- ✓ Implementing security controls and access restrictions to protect sensitive data and intellectual property in the pipeline ecosystem
- ✓ Documenting and maintaining security policies, procedures, and guidelines to promote awareness and adherence to security best practices
- ✓ Collaborating with internal and external stakeholders to address security vulnerabilities and implement remediation measures
- ✓ Participating in security awareness training and education initiatives to promote a culture of security and compliance across the organisation

Key Task 7:

Mentoring and training junior pipeline developers and technical artists

Associated activities

- ✓ Providing guidance, mentorship, and technical leadership to junior pipeline developers and technical artists to support their professional development and growth
- ✓ Conducting code reviews, pair programming sessions, and knowledge-sharing sessions to transfer skills and expertise to junior team members
- ✓ Creating and delivering training materials, workshops, and tutorials to educate junior team members on pipeline development best practices, tools, and techniques
- ✓ Assigning challenging projects and tasks to junior team members to provide opportunities for skill development and hands-on experience
- ✓ Providing constructive feedback and performance evaluations to junior team members to support their career advancement and progression

Competencies Required

Core Competencies	Technical Competencies		Leadership Competencies	Personal Development Competencies
Adaptability to Change	VFX Pipeline		Leading Teams	Continuous Learning and Improvement
Communication	VFX Software Suites		Managing Budgets	Industry Knowledge
Decision Making	Knowledge of Photography and Cinematography		Managing People	Managing Self & Resilience (Wellbeing)
Managing Deadlines	Rigging		Mentoring and Coaching	Self-Awareness
Problem Solving	2D	Compositing Software	Strategic Thinking	Working as a Freelancer/ Self-Employed
Quality Oriented	3D	Digital Sculpting Software	Working Inclusively	Working Under Pressure
Time, Task and Resource Management	3D	Lighting Techniques		
Working Collaboratively	3D	Rendering Engines		
Working Independently	3D	Shading and Material Creation		
	3D	Texture Mapping		
	3D	3D Modelling and Animation Software		
	3D	Groom Techniques		

Pipeline TD (Technical Director)

Role Summary:

A Pipeline Technical Director (TD) is responsible for designing, implementing, and maintaining the technical infrastructure and tools that support the production pipeline in visual effects (VFX) studios. They work closely with artists, developers, and production staff to optimise workflow efficiency, troubleshoot technical issues, and ensure the successful delivery of high-quality VFX assets.

Key Tasks:

1. Designing and developing pipeline tools and workflows
2. Providing technical support and troubleshooting assistance
3. Managing data storage and asset management systems
4. Collaborating with department leads and production staff
5. Conducting research and development for pipeline improvements
6. Implementing pipeline security measures and data protection protocols
7. Conducting pipeline performance optimisation and scalability assessments

Task statements

Key Task 1:

Designing and developing pipeline tools and workflows

Associated activities

- ✓ Analysing production requirements and workflow needs to design efficient and scalable pipeline architectures
- ✓ Developing custom scripts, plugins, and tools using programming languages such as Python, C++, and MEL to automate tasks and streamline workflows
- ✓ Collaborating with department leads and production staff to gather requirements and define pipeline specifications
- ✓ Conducting usability testing and gathering feedback to iteratively refine and improve pipeline tools and workflows
- ✓ Documenting pipeline tools and workflows, including technical specifications, usage guidelines, and troubleshooting procedures

Key Task 2:

Providing technical support and troubleshooting assistance

Associated activities

- ✓ Monitoring pipeline performance and health using monitoring tools and logging systems to identify and resolve technical issues
- ✓ Providing timely technical support and troubleshooting assistance to artists and production staff to resolve pipeline-related issues and minimise downtime
- ✓ Documenting support requests, troubleshooting steps, and resolutions to build a knowledge base and facilitate future issue resolution
- ✓ Collaborating with developers and system administrators to investigate and resolve complex technical issues and escalations
- ✓ Communicating effectively with stakeholders to manage expectations and provide regular updates on issue resolution progress

Key Task 3:

Managing data storage and asset management systems

Associated activities

- ✓ Designing, implementing, and maintaining data storage and asset management systems to organise and manage VFX assets, including 3D models, textures, and animations
- ✓ Ensuring data integrity, version control, and data security across the pipeline ecosystem
- ✓ Optimising data storage and retrieval processes to minimise latency and maximise throughput
- ✓ Collaborating with system administrators and IT professionals to provision and configure storage resources
- ✓ Monitoring storage usage and performance metrics to identify and address capacity and performance bottlenecks

Key Task 4:

Collaborating with department leads and production staff

Associated activities

- ✓ Participating in meetings and workshops with department leads and production staff to understand production requirements and workflow challenges
- ✓ Documenting and prioritising requirements, constraints, and dependencies to inform pipeline design and development
- ✓ Conducting stakeholder interviews and workshops to elicit feedback and gather input on pipeline design and functionality
- ✓ Iteratively refining pipeline specifications based on stakeholder feedback and changing production requirements
- ✓ Communicating pipeline design decisions and trade-offs to stakeholders and obtaining buy-in for proposed solutions

Key Task 5:

Conducting research and development for pipeline improvements

Associated activities

- ✓ Staying informed about emerging technologies, industry trends, and best practices in VFX production and pipeline development
- ✓ Conducting research and experimentation to evaluate new tools, technologies, and methodologies for potential adoption
- ✓ Collaborating with vendors, industry partners, and academic institutions to explore and pilot new technologies and workflows
- ✓ Participating in conferences, workshops, and online forums to share knowledge, exchange ideas, and network with peers in the VFX community
- ✓ Documenting research findings and best practices and disseminating knowledge to internal teams through presentations, training sessions, and documentation

Key Task 6:

Implementing pipeline security measures and data protection protocols

Associated activities

- ✓ Assessing potential security vulnerabilities within the pipeline infrastructure and implementing appropriate security measures, such as access controls, encryption, and authentication mechanisms
- ✓ Collaborating with IT security professionals to ensure compliance with industry standards and regulations, such as GDPR and MPAA guidelines
- ✓ Conducting regular security audits and penetration tests to identify and remediate security weaknesses and vulnerabilities
- ✓ Establishing data protection protocols, backup procedures, and disaster recovery plans to safeguard critical VFX assets and ensure business continuity
- ✓ Providing training and awareness programs to educate pipeline users about security best practices and policies

Key Task 7:

Conducting pipeline performance optimisation and scalability assessments

Associated activities

- ✓ Analysing pipeline performance metrics and conducting benchmark tests to identify performance bottlenecks and scalability limitations
- ✓ Optimising pipeline workflows, algorithms, and data structures to improve performance and resource utilisation
- ✓ Scaling pipeline infrastructure to accommodate growing production demands and larger datasets, such as high-resolution textures and complex simulations
- ✓ Collaborating with system administrators and IT professionals to provision and configure additional hardware resources, such as compute nodes, storage arrays, and network bandwidth
- ✓ Monitoring and tuning pipeline performance in real-time, using monitoring tools and performance profiling techniques to identify and address performance issues proactively

Competencies Required

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Technical Director (TD)

Role Summary:

A Technical Director (TD) in the VFX industry develops and maintains the technical infrastructure and workflows used in the production of visual effects. They bridge the gap between artistic vision and technical implementation, ensuring that the production team has the necessary tools, systems, and support to execute projects efficiently and effectively. Technical Directors collaborate with various departments to solve complex technical challenges, optimise workflows, and drive innovation within the studio.

Key Tasks:

1. Developing and maintaining production pipelines, tools, and workflows
2. Providing technical support and troubleshooting for production teams
3. Collaborating with department heads to define technical requirements and priorities
4. Researching and implementing new technologies and techniques to improve production processes
5. Training and mentoring artists and technical staff on new tools and workflows
6. Ensuring compliance with industry standards and best practices for data management and security
7. Leading and managing technical projects and initiatives to meet production goals

Task statements

Key Task 1:

Developing and maintaining production pipelines, tools, and workflows

Associated activities

- ✓ Designing, implementing, and optimising production pipelines for various stages of the VFX workflow
- ✓ Developing custom tools, scripts, and plugins to automate repetitive tasks and streamline production processes
- ✓ Collaborating with department leads to integrate tools and workflows into the production pipeline
- ✓ Conducting regular reviews and updates to ensure the reliability, efficiency, and scalability of production tools and workflows
- ✓ Documenting pipeline architecture, processes, and best practices for internal use and knowledge sharing

Key Task 2:

Providing technical support and troubleshooting for production teams

Associated activities

- ✓ Serving as the primary point of contact for technical issues and inquiries from production teams
- ✓ Diagnosing and resolving technical issues related to software, hardware, and network infrastructure
- ✓ Providing on-call support and troubleshooting assistance during critical production periods
- ✓ Conducting root cause analysis and implementing corrective actions to prevent recurring technical issues
- ✓ Communicating technical updates, patches, and maintenance schedules to production teams in a timely manner

Key Task 3:

Collaborating with department heads to define technical requirements and priorities

Associated activities

- ✓ Participating in production meetings to gather requirements and priorities from department heads
- ✓ Providing technical guidance and recommendations to support the realisation of artistic vision and project goals
- ✓ Estimating time and resource requirements for technical tasks and initiatives
- ✓ Aligning technical priorities with production schedules and deadlines to ensure timely delivery of assets
- ✓ Advocating for technical improvements and innovations to enhance production quality and efficiency

Key Task 4:

Researching and implementing new technologies and techniques to improve production processes

Associated activities

- ✓ Staying informed about emerging technologies, trends, and best practices in the VFX industry
- ✓ Evaluating new software, hardware, and tools for potential integration into the production pipeline
- ✓ Prototyping and testing new techniques and workflows to assess feasibility and effectiveness
- ✓ Collaborating with vendors and industry partners to explore opportunities for collaboration and innovation
- ✓ Presenting findings and recommendations to studio leadership to inform technology investment decisions

Key Task 5:

Training and mentoring artists and technical staff on new tools and workflows

Associated activities

- ✓ Developing and delivering training sessions, workshops, and tutorials on production tools and workflows
- ✓ Providing one-on-one mentorship and support to artists and technical staff to help them master new skills and techniques
- ✓ Creating educational materials, documentation, and resources to support ongoing learning and development
- ✓ Encouraging knowledge sharing and collaboration among team members to foster a culture of continuous improvement
- ✓ Monitoring progress and providing feedback to ensure that artists and technical staff are effectively applying new tools and workflows

Key Task 6:

Ensuring compliance with industry standards and best practices for data management and security

Associated activities

- ✓ Implementing and enforcing data management policies, procedures, and protocols to safeguard intellectual property and sensitive information
- ✓ Conducting regular audits and assessments to ensure compliance with industry standards, regulations, and contractual obligations
- ✓ Implementing data encryption, access controls, and other security measures to protect against unauthorised access and data breaches
- ✓ Collaborating with IT and security teams to address vulnerabilities and mitigate risks related to data management and security
- ✓ Providing training and guidance to production teams on data handling best practices and security protocols

Key Task 7:

Leading and managing technical projects and initiatives to meet production goals

Associated activities

- ✓ Defining project scopes, objectives, and deliverables in collaboration with stakeholders and project sponsors
  Developing project plans, schedules, and budgets to ensure timely and cost-effective delivery of technical solutions
- ✓ Leading cross-functional project teams comprised of artists, technical staff, and external partners
  Monitoring project progress and performance to identify and address risks, issues, and dependencies
- ✓ Communicating project status, milestones, and outcomes to stakeholders and senior management on a regular basis

Competencies Required

Core Competencies	Technical Competencies		Leadership Competencies	Personal Development Competencies
Adaptability to Change	VFX Pipeline		Leading Teams	Continuous Learning and Improvement
Communication	VFX Software Suites		Managing Budgets	Industry Knowledge
Decision Making	Knowledge of Photography and Cinematography		Managing People	Managing Self & Resilience (Wellbeing)
Managing Deadlines	Rigging		Mentoring and Coaching	Self-Awareness
Problem Solving	2D	Compositing Software	Strategic Thinking	Working as a Freelancer/ Self-Employed
Quality Oriented	3D	Digital Sculpting Software	Working Inclusively	Working Under Pressure
Time, Task and Resource Management	3D	Lighting Techniques		
Working Collaboratively	3D	Rendering Engines		
Working Independently	3D	Shading and Material Creation		
	3D	Texture Mapping		
	3D	3D Modelling and Animation Software		
	3D	Groom Techniques		

Software Developer

Role Summary:

A Software Developer in the VFX industry is responsible for designing, developing, and maintaining software tools and applications that support various aspects of the visual effects production pipeline. They collaborate with artists, technical directors, and other stakeholders to create efficient and user-friendly solutions that enhance workflow productivity and creativity.

Key Tasks:

1. Designing and implementing software tools for the VFX pipeline
2. Developing and maintaining plugins and scripts for industry-standard software
3. Collaborating with production teams to understand workflow requirements
4. Conducting testing and debugging of software solutions
5. Providing technical support and training to end-users
6. Researching and integrating new technologies into existing workflows
7. Documenting software development processes and best practices

Task statements

Key Task 1:

Designing and implementing software tools for the VFX pipeline

Associated activities

- ✓ Gathering requirements from production teams and stakeholders to define software specifications
- ✓ Designing intuitive user interfaces and workflows for software tools using industry- standard frameworks
- ✓ Writing clean, efficient, and maintainable code to implement software features and functionality
- ✓ Integrating software tools into existing production pipelines and workflows
- ✓ Conducting code reviews and collaborating with peers to ensure code quality and consistency

Key Task 2:

Developing and maintaining plugins and scripts for industry-standard software

Associated activities

- ✓ Extending the functionality of industry-standard software such as Autodesk Maya, SideFX Houdini, and Adobe After Effects through custom plugins and scripts
- ✓ Developing tools and utilities to automate repetitive tasks and streamline production workflows
- ✓ Maintaining compatibility with new software versions and updates through ongoing development and testing
- ✓ Providing documentation and user support resources for plugins and scripts
- ✓ Collaborating with software vendors and open-source communities to contribute to the development of industry-standard tools and APIs

Key Task 3:

Collaborating with production teams to understand workflow requirements

Associated activities

- ✓ Work closely with the camera crew and VFX team to ensure that data is captured and transferred according to production schedules
- ✓ Help prepare and hand over data to post-production teams, ensuring that all files are correctly organised and ready for use
- ✓ Relay any data-related instructions or information between departments to ensure smooth workflow and prevent delays
- ✓ Attend dailies or review sessions, providing support in accessing and organising data as needed

Key Task 4:

Conducting testing and debugging of software solutions

Associated activities

- ✓ Developing comprehensive test plans and strategies to validate software functionality and performance
- ✓ Performing unit tests, integration tests, and regression tests to identify and address software defects and issues
- ✓ Debugging and troubleshooting software problems reported by end-users and QA testers
- ✓ Collaborating with QA teams to reproduce and isolate software bugs for analysis and resolution
- ✓ Implementing fixes and updates to address identified issues and ensure software stability and reliability

Key Task 5:

Providing technical support and training to end-users

Associated activities

- ✓ Offering timely and effective assistance to end-users experiencing technical issues or challenges with software tools
- ✓ Providing user training sessions and workshops to educate artists and production staff on the use of software tools and best practices
- ✓ Creating and maintaining documentation, tutorials, and knowledge base articles to support self-service troubleshooting and learning
- ✓ Monitoring user feedback channels and responding promptly to inquiries and requests for assistance
- ✓ Identifying opportunities for process improvement and user empowerment through training and support initiatives

Key Task 6:

Researching and integrating new technologies into existing workflows

Associated activities

- ✓ Staying informed about emerging technologies, trends, and best practices in software development and VFX production
- ✓ Evaluating new software libraries, frameworks, and tools for potential integration into existing workflows
- ✓ Experimenting with prototype implementations and proofs of concept to assess feasibility and performance
- ✓ Collaborating with R&D teams and industry partners to explore innovative solutions and techniques for VFX production
- ✓ Contributing to the development of internal research projects and initiatives to advance the state of the art in VFX technology

Key Task 7:

Leading and managing technical projects and initiatives to meet production goals

Associated activities

- ✓ Maintaining detailed documentation of software architecture, design decisions, and implementation details
- ✓ Creating technical specifications, API references, and developer guides to facilitate understanding and usage of software tools
- ✓ Documenting coding standards, guidelines, and best practices to promote consistency and quality across development teams
- ✓ Establishing version control policies and practices to ensure proper management and tracking of code changes
- ✓ Conducting regular reviews and updates of documentation to reflect changes and improvements in software development processes

Competencies Required

Core Competencies	Technical Competencies		Leadership Competencies	Personal Development Competencies
Adaptability to Change	VFX Pipeline		Leading Teams	Continuous Learning and Improvement
Communication	VFX Software Suites		Managing Budgets	Industry Knowledge
Decision Making	Knowledge of Photography and Cinematography		Managing People	Managing Self & Resilience (Wellbeing)
Managing Deadlines	Rigging		Mentoring and Coaching	Self-Awareness
Problem Solving	2D	Compositing Software	Strategic Thinking	Working as a Freelancer/ Self-Employed
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Time, Task and Resource Management	3D	Lighting Techniques		
Working Collaboratively	3D	Rendering Engines		
Working Independently	3D	Shading and Material Creation		
	3D	Texture Mapping		
	3D	3D Modelling and Animation Software		
	3D	Groom Techniques		

Systems Administrator

Role Summary:

An IT Systems Administrator in the VFX industry is responsible for maintaining and optimising the IT infrastructure and systems that support the production pipeline. They ensure the reliability, security, and performance of hardware, software, networks, and servers to enable smooth operations for artists and production teams.

Key Tasks:

1. Managing and maintaining IT infrastructure and systems
2. Providing technical support and troubleshooting assistance
3. Implementing security measures and data protection strategies
4. Planning and executing system upgrades and migrations
5. Monitoring system performance and optimising resource utilisation
6. Ensuring compliance with industry regulations and standards

Task statements

Key Task 1:

Managing and maintaining IT infrastructure and systems

Associated activities

- ✓ Installing, configuring, and maintaining servers, workstations, storage systems, and networking equipment
- ✓ Managing user accounts, permissions, and access controls for various systems and applications
- ✓ Deploying and managing software updates, patches, and licences across the network
- ✓ Performing routine backups and disaster recovery procedures to ensure data integrity and availability
- ✓ Monitoring system logs and alerts to identify and address potential issues proactively

Key Task 2:

Providing technical support and troubleshooting assistance

Associated activities

- ✓ Responding to user inquiries, issues, and service requests in a timely and professional manner
- ✓ Diagnosing and resolving hardware, software, and network problems reported by end- users
- ✓ Escalating complex or critical issues to appropriate support teams or vendors for resolution
- ✓ Documenting support tickets, resolutions, and troubleshooting steps for future reference and knowledge sharing
- ✓ Conducting user training sessions and workshops to educate staff on IT policies, procedures, and best practices

Key Task 3:

Implementing security measures and data protection strategies

Associated activities

- ✓ Managing and enforcing security policies, procedures, and access controls to protect sensitive data and systems
- ✓ Conducting regular security audits and vulnerability assessments to identify and mitigate potential risks
- ✓ Installing and configuring security software, firewalls, and intrusion detection/prevention systems
- ✓ Monitoring system logs and network traffic for signs of unauthorised access or malicious activity
- ✓ Developing and implementing data backup, encryption, and disaster recovery plans to safeguard critical assets

Key Task 4:

Planning and executing system upgrades and migrations

Associated activities

- ✓ Assessing current IT infrastructure and systems to identify areas for improvement or modernization
- ✓ Planning and coordinating hardware and software upgrades, migrations, and deployments
- ✓ Conducting thorough testing and validation of new systems and configurations before production rollout
- ✓ Minimising downtime and disruption by scheduling upgrades and migrations during off- peak hours
- ✓ Communicating effectively with stakeholders to manage expectations and provide updates on project progress

Key Task 5:

Monitoring system performance and optimising resource utilisation

Associated activities

- ✓ Monitoring system performance metrics, including CPU usage, memory utilisation, and network bandwidth
- ✓ Identifying performance bottlenecks and areas of inefficiency through performance analysis and trending
- ✓ Implementing optimisation strategies and tuning parameters to improve system responsiveness and scalability
- ✓ Scaling infrastructure resources up or down as needed to accommodate changing workload demands
- ✓ Generating and analysing performance reports to track trends, identify issues, and make data-driven decisions for continuous improvement

Key Task 6:

Ensuring compliance with industry regulations and standards

Associated activities

- ✓ Conducting regular audits and assessments to ensure compliance with industry regulations, standards, and best practices
- ✓ Implementing security controls and policies to meet requirements such as GDPR, PCI DSS, and ISO/IEC 27001
- ✓ Keeping abreast of changes to relevant regulations and standards and updating systems and procedures accordingly
- ✓ Collaborating with legal and compliance teams to address any compliance issues or concerns
- ✓ Providing documentation and evidence of compliance efforts for audits and regulatory inspections
- ✓ Participating in industry forums and conferences to stay informed about emerging trends and regulations in the VFX industry

Competencies Required

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