|  |  |  |  |
| --- | --- | --- | --- |
| **Table 2: Quality attributes and scenarios derived from engineering objectives** | | | |
| **Engineering Objective** | **Quality Attribute** | **Quality Attribute Scenario** | **Priority** |
| Ensure data privacy of user when connecting from unsecure networks during usage of the teleconferencing services | Security | Ther user’s data is encrypted using industry standard encryption algorithms when transmitting over unsecure networks, ensuring confidentiality and preventing unauthorized access. | H |
| Ensure users have a nominal experience when using the teleconferencing services from any location | Usability | The users can easily join teleconferencing sessions from any locations by simply clicking a link or entering a meeting ID. The user interface is intuitive, providing clearing audio and video controls, and supports a variety of devices and operating systems for seamless access. | H |
| Optimize networking for teleconferencing services | Performance | The teleconferencing system automatically adjusts network settings to optimize audio and video quality, minimizing latency and ensuring a smooth conferencing experience. | H |
| Support the addition of a user to an existing session of the teleconferencing services | Scalability | The teleconferencing system can seamlessly accommodate new users joining ongoing meeting, maintaining  Performance and user experience. | M |
| Support Desktop and mobile operating systems in the teleconferencing services | Cross-  platform  compatibility | The teleconferencing services are compatible with a wide range of desktop and mobile operating systems, including Windows, macOS, iOS, and Android, allowing users to access and utilize the services seamlessly ensuring accessibility across different devices. | M |
| Implement an easy to use and intuitive interface for teleconferencing services | Cohesive  Integrity | The teleconferencing services offers a user-friendly design. The users can easily navigate and access features, such as audio/video settings, white board sharing, resulting in a smooth and efficient collaboration experience. | M |
| Ensure data privacy of user when connecting from unsecure networks during usage of the video conferencing services | Security | The user’s data is protected through encryption and secure communication protocols when transmitting over unsecure networks, ensuring compliance with laws based on region, privacy, and preventing unauthorized access to sensitive information during chat sessions. | H |
| Ensure users have a nominal experience when using the video conferencing services from any location | Usability | The users can seamlessly join video conferencing sessions from any location with ease. The user interface provides intuitive controls for video and audio settings, offers stable connectivity, and supports multiple video layouts, enabling users to have a smooth and immersive video conferencing experience regardless of location. | H |
| Optimize networking for conferencing services | Performance | The video conferencing system dynamically adjusts network settings based on available bandwidth, optimizing audio and video quality while minimizing latency. It utilizes adaptive streaming and traffic prioritization techniques to ensure an optimal conferencing experience. | H |
| Support the addition of a user to an existing session of the | Scalability |  | M |
| Support Desktop and mobile operating systems in the video conferencing services | Cross-  platform  compatibility |  | M |
| Implement an easy to use and intuitive interface for video conferencing services | Cohesive  Integrity |  | M |
| Ensure data privacy of user when connecting from unsecure networks during usage of the chat services | Security |  | H |
| Ensure users have a nominal experience when using the chat services from any location | Usability |  | H |
| Optimize networking for chat services | Performance |  | H |
| Support the addition of a user to an existing session of the chat services | Scalability |  | M |
| Support Desktop and mobile operating systems in the chat services | Cross-  platform  compatibility |  | M |
| Implement an easy to use and intuitive interface for chat services | Cohesive  Integrity |  | M |
| Ensure data privacy of user when connecting from unsecure networks during usage of the file sharing services | Security |  | H |
| Ensure users have a nominal experience when using the file sharing services from any location | Usability |  | H |
| Optimize networking for file sharing services | Performance |  | H |
| Support the addition of a user to an existing session of the file sharing services | Scalability |  | M |
| Support Desktop and mobile operating systems in the file sharing services | Cross-  platform  compatibility |  | M |
| Implement an easy to use and intuitive interface for file sharing services | Cohesive  Integrity |  | M |
| Ensure data privacy of user when connecting from unsecure networks during usage of the shared whiteboard services | Security |  | H |
| Ensure users have a nominal experience when using the shared whiteboard services from any location | Usability |  | H |
| Optimize networking for shared whiteboard services | Performance |  | H |
| Support the addition of a user to an existing session of the shared whiteboard services | Scalability |  | M |
| Support Desktop and mobile operating systems in the shared whiteboard services | Cross-  platform  compatibility |  | M |
| Implement an easy to use and intuitive interface for shared whiteboard services | Cohesive  Integrity |  | M |
| Reduce man hours spent waiting for teleconferencing services to become available | Availability |  | H |
| Implement an in proved process for integrating changes to the teleconferencing services | Integrability |  | L |
| Reduce the time spent troubleshooting distruptions on the teleconferencing service | Testability |  | L |
| Increase efficiency when releasing changes for the teleconferencing services | Deployability |  | L |
| Reduce man hours spent waiting for video conferencing services to become available | Availability |  | H |
| Implement an in proved process for integrating changes to the video conferencing services | Integrability |  | L |
| Reduce the time spent troubleshooting distruptions on the video conferencing services | Testability |  | L |
| Increase efficiency when releasing changes for the video conferencing services | Deployability |  | L |
| Reduce man hours spent waiting for chat services to become available | Availability |  | H |
| Implement an improved process for integrating changes to the chat services | Integrability |  | L |
| Reduce the time spent troubleshooting distruptions on the chat services | Testability |  | L |
| Increase efficiency when releasing changes for the chat services | Deployability |  | L |
| Reduce man hours spent waiting for file sharing services to become available | Availability |  | H |
| Implement an improved process for integrating changes to the file sharing services | Integrability |  | L |
| Reduce the time spent troubleshooting disruptions on the file sharing services | Testability |  | L |
| Increase efficiency when releasing changes for the file sharing services | Deployability |  | L |
| Reduce man hours spent  waiting for shared whiteboard services to become available | Availability |  | H |
| Implement an improved process for integrating changes to the shared whiteboard services | Integrability |  | L |
| Reduce the time spent troubleshooting distruptions on the whiteboard services | Testability |  | L |
| Increase efficiency when releasing changes for the shared whiteboard services | Deployability |  | L |
| Decrease man hours spent making changes to the teleconferencing services | Modifiability |  | M |
| Reduce the processing power and kilowatt usage of other services when using teleconferencing services | Energy  Efficiency |  | L |
| Decrease man hours spent making changes to the video conferencing services | Modifiability |  | M |
| Reduce the processing power and kilowatt usage of other services when using video conferencing services | Energy  Efficiency |  | L |
| Decrease man hours spent making changes to the chat services | Modifiability |  | M |
| Reduce the processing power and kilowatt usage of other services when using chat services | Energy  Efficiency |  | L |
| Decrease man hours spent making changes to the file sharing services | Modifiability |  | M |
| Reduce the processing power and kilowatt usage of other services when using file sharing services | Energy  Efficiency |  | L |
| Decrease man hours spent making changes to the shared whiteboard services | Modifiability |  | M |
| Reduce the processing power and kilowatt usage of other services when using shared whiteboard services | Energy  Efficiency |  | L |

|  |  |
| --- | --- |
| **Table 1: Business Goals for the Building Automation System** | |
| **Business Goals**  **(Mission Objective)** | **Goal Refinement**  **(Engineering Objectives)** |
| Increase efficiency of collaboration between geographically dispersed employees | Ensure data privacy of user when connecting from unsecure networks during usage of the teleconferencing services |
| Ensure users have a nominal experience when using the teleconferencing services from any location |
| Optimize networking for teleconferencing services |
| Support the addition of a user to an existing session of the teleconferencing services |
| Support Desktop and mobile operating systems in the teleconferencing services |
| Implement an easy to use and intuitive interface for teleconferencing services |
| Ensure data privacy of user when connecting from unsecure networks during usage of the video conferencing services |
| Ensure users have a nominal experience when using the video conferencing services from any location |
| Optimize networking for conferencing services |
| Support the addition of a user to an existing session of the |
| Support Desktop and mobile operating systems in the video conferencing services |
| Implement an easy to use and intuitive interface for video conferencing services |
| Ensure data privacy of user when connecting  from unsecure networks during usage of the chat services |
| Ensure users have a nominal experience when using the chat services from any location |
| Optimize networking for chat services |
| Support the addition of a user to an existing session of the chat services |
| Support Desktop and mobile operating systems in the chat services |
| Implement an easy to use and intuitive interface for chat services |
| Ensure data privacy of user when connecting from unsecure networks during usage of the file sharing services |
| Ensure users have a nominal experience when using the file sharing services from any location |
| Optimize networking for file sharing services |
| Support the addition of a user to an existing session of the file sharing services |
| Support Desktop and mobile operating systems in the file sharing services |
| Implement an easy to use and intuitive interface for file sharing services |
| Ensure data privacy of user when connecting from unsecure networks during usage of the shared whiteboard services |
| Ensure users have a nominal experience when using the shared whiteboard services from any location |
| Optimize networking for shared whiteboard services |
| Support the addition of a user to an existing session of the shared whiteboard services |
| Support Desktop and mobile operating systems in the shared whiteboard services |
| Implement an easy to use and intuitive interface for shared whiteboard services |
| Reduce employee productivity downtime or time spent on menial tasks | Reduce man hours spent waiting for teleconferencing services to become available |
| Implement an in proved process for integrating changes to the teleconferencing services |
| Reduce the time spent troubleshooting disruptions on the teleconferencing service |
| Increase efficiency when releasing changes for the teleconferencing services |
| Reduce man hours spent waiting for video conferencing services to become available |
| Implement an in proved process for integrating changes to the video conferencing services |
| Reduce the time spent troubleshooting disruptions on the video conferencing services |
| Increase efficiency when releasing changes for the video conferencing services |
| Reduce man hours spent waiting for chat services to become available |
| Implement an in proved process for integrating changes to the chat services |
| Reduce the time spent troubleshooting disruptions on the chat services |
| Increase efficiency when releasing changes for the chat services |
| Reduce man hours spent waiting for file sharing services to become available |
| Implement an in proved process for integrating changes to the file sharing services |
| Reduce the time spent troubleshooting disruptions on the file sharing services |
| Increase efficiency when releasing changes for the file sharing services |
| Reduce man hours spent waiting for shared whiteboard services to become available |
| Implement an in proved process for integrating changes to the shared whiteboard services |
| Reduce the time spent troubleshooting disruptions on the whiteboard services |
| Increase efficiency when releasing changes for the shared whiteboard services |
| Reduce the operating costs of our business systems | Decrease man hours spent making changes to the teleconferencing services |
| Reduce the processing power and kilowatt usage of other services when using teleconferencing services |
| Decrease man hours spent making changes to the video conferencing services |
| Reduce the processing power and kilowatt usage of other services when using video conferencing services |
| Decrease man hours spent making changes to the chat services |
| Reduce the processing power and kilowatt usage of other services when using chat services |
| Decrease man hours spent making changes to the file sharing services |
| Reduce the processing power and kilowatt usage of other services when using file sharing services |
| Decrease man hours spent making changes to the shared whiteboard services |
| Reduce the processing power and kilowatt usage of other services when using shared whiteboard services |