

## **ABSTRACT**

*Muhammadiyah Sumberrejo Islamic Hospital (RSIM Sumberrejo) is a hospital institution owned by an Islamic organization in Bojonegoro. RSIM Sumberrejo has applied information technology to perform its administrative activities which aims to facilitate data processing and make the existing activities at this hospital run more effectively and efficiently. RSIM Sumberrejo already has a server space that is useful as a data center for as a container of IT management.*

*Based on the RSIM Sumberrejo plan for the long term, the data center at RSIM Sumberrejo will be developed. One thing that is developed is the equitable distribution of HVAC room system in terms of room humidity. Therefore it is necessary to design humidity monitoring system to determine the required moisture conditions in the data center.*

*In the design of data center RSIM Sumberrejo using best practice TIA-942 humidity and method of PPDIIO Network Life-Cycle Approach in the first three stages of Prepare, Plan, Design. The use of these methods fits well with RSIM Sumberrejo's data center development as it has an Optimize phase advantage, which can be used for long-term development.*

*The purpose of this research is the design of RSIM Sumberrejo data center design in accordance with TIA-942 standard especially in terms of HVAC arrangement in the room. It is known that the recommended data center space conditions for good moisture in the data center are in the 40% to 50%.*

*Keywords: Data center, Humidity, Standard TIA-942, PPDIIO Life-Cycle Approach*