

Healthcare Information Systems and Electronic Health Records

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An information system is the collection, storage, dissemination, and communication of the gathered information. In most cases, information systems relate to the collection and storage of data, both personal and corporate. Therefore, information is all about the network system that allows communication between parties to occur. So, [information system](#) sites are those sites owned by companies that deal with communication or dissemination of information. In healthcare sectors, there are Health Information Systems (HIS) and Electronic Medical Records (EMR), which are used to manage patients' personal data and to ensure that proper and efficient healthcare services are delivered to the public.

The Focus Of The Interview

The position is a senior position which requires a person holding to have at least a bachelor's degree in Information technology (IT) from a recognized institution. It is also essential to have certification in health record management, and professional certificate in database management and CCNA, which is a network professional certification. An individual with such a background understands the data management applications and can efficiently and competently address the challenges which can arise in the sector without having much difficulty. The bachelor's degree in Information System (IS) or Information Technology (IT) or Computer Science (CS) provides a clear knowledge of data administration, management, and troubleshooting of various data problems.

In order to be confident or competent in addressing various data management issues, it is better to acquire further knowledge or professional causes in IT. And therefore, certification in data management like Oracle data management will provide an individual with improved skills and competency in data management using advanced SQL and other tools which are provided by Oracle. The certification in network-related course like CNNA is also likely to improve understanding of network management. An individual in charge of data management or system management must be able to troubleshoot network problems as well. It is because, in data management, IPs are assigned, and with knowledge of the network and data management, individuals should be able to assign IPs and also protect the information system from both external and internal intruders.

It is appropriate to have a certificate in health record management (HRM) to be able to properly manage information systems for a healthcare provider facility. Though an information manager, or data manager does not deal with health-related issues happening within the healthcare setup, it is important to understand the sequence of the flow of data so that an individual can provide better management of healthcare data or information system.

New Knowledge Of Information Systems

Use Of Safe Mode When Working With The EMR

Safe mode is normally used to troubleshoot computer problems and data as well. According to (), the Namenode, which controls the file system for the database, usually goes into safe mode when the computer is turned on to safe mode. Therefore, it is not possible to use the EMR system when the computer is turned on safe mode. Again, EMR will not be able to load in the first place when the computer is on safe mode. The HDFS cluster which controls the data visibility will be deactivated, and therefore, any attempt to access EMR when the computer is on safe mode may lead to [data loss](#). It is, therefore, not allowed to attempt to use EMR in safe mode or use EMR when the system is on safe mode. It can cause a lot of danger, such as data loss, and gathering data is not an easy task.

An IP Address When You Are Using The EMR

The IP address is essential because it is needed for the system to connect and therefore, it is IP address is being used so that EMR could be visible in the intranet of the company. It is used to connect through the subnet created specifically for the connection of EMR. The private network is used instead of the public network so that [access to the system is limited](#) to a specific group of people described in the system rules. The network administrators must be careful when assigning IP addresses to every machine where the EMR system is being used for it to be dressed easily when need be for change to be implemented.

How can employees find an IP address in the Hospital?

The network configuration takes place from a private group, and therefore if employees want to find the IP for every computer, they can either check the manual from hardware configuration, under cluster or every computer since it is required to assign each computer manually because of the system (EMR) which a computer run. It is also because network configuration is done manually because of security which needs to be enhanced when setting up network or IP addresses which can allow the system to operate.

It is also easy to locate a computer in the hospital based on the IP address. First, the network administrator marks computers and IP addresses when assigning computers to a network if the IP addresses are done manual. And with an institution like a hospital, it is advisable to assign IP addresses manually for security reasons. Network administration would create a subnet and each subnet has a specific number of IP addresses. And therefore, using a network management application, the network administrator could easily identify every computer in the hospital based on the IP address without any difficulty. The administrator would run a query which will bring the list of all computers, the IP address assigned to them and where each computer is located. Therefore, it is

easy to locate a computer in the hospital using the IP address.

Default Gateway

The default gateway is the path created for all network activities to follow. The default gateway allows communication to occur between computers and others outside the network. It is the route provided by default for communication unless the user specifies another route for the information to follow. The hospital information deals with the default gateway by providing a clear path for all information to follow. However, the default gateway is assigned in the network private under the EMR cluster to make sure that a clear path for communication or connection is created. The system can allow or stop an employee from using patients' information to search the intranet. The system can be set from the EMR cluster to permit which kind of search and stop. The specification is designed as policy in the system under the EMR cluster, and this will ensure that communication is regulated and the patient's details are not misused by healthcare providers. It can also permit the kind of search which can be conducted over the internet based on the policy set in the system.

Remote Access To Hospital EMR

In order for an employee to access EMR remotely from home and any other places, the access password must be provided for such an employee. It is usually avoided by policy to have access to a system remotely due to security reasons which can violate the privacy and confidentiality of medical records. However, an employee can access the EMR system through the use of public IP address marked at the private IP address on the router to be able to access the system remotely. The port forwarding is set using a specific IP address which is given to an employee to use in accessing the intranet. The intranet will be accessed through the use public address, which provides access to the intranet through NAT, and it is important to be cautious for security reasons. This will allow an employee to access the hospital's emails and other information from the intranet.

Virtual Private network connection

The organization uses a virtual private network (VPN) to make sure that the connection is secure and private unauthorized access to the system. The VPN is deployed at the router to make sure that every connection is secure and monitored so that any new entry into the system is identified and prevented. It helps the organization to create an encrypted connection between public and private connection and it is suitable for institutions like hospitals using EMR because it will help in improving the security to the system. It is, therefore, possible and advisable to use VPN to secure PC and other devices in the organization.

Securing Login

It is a policy of the company to make sure that each individual or employee is assigned specific login to the system. The login is assigned to new employees based on their rank or position, terms of the

contract with the organization and level of understanding of the system an organization use (Biondich, Deshen and Sharon, 2015). The login information is supposed to be altered based on the company's policy which requires employees to change their password after every one week and place the strongest password possible, as illustrated in the formula given by the administrator. The system is installed which informs all employees to change their password after every week. It pops up on the screen when an employee wants to log in to remind anyone who has not changed the password. It will not allow anyone who has not changed the password to log in to the system. If an employee fails to change the password, it will log off and notify the user to see the system administrator. This is to make sure that the right person is using the system and to prevent unauthorized entry into the system.

Evidence-Based Practice

There are several evidence-based practices that can be used to showcase the system and its effectiveness. The system is very easy to navigate, and there is a tutorial that provides detailed information on how the system can be used. It is users' friendly with an interface that can be used by anyone who has knowledge of the introduction to computers. It only requires a few pieces of training for new users to understand it and use it proficiently.

In conclusion, managing EMR requires a broader understanding of networking technologies, database management and knowledge of medical records as well. This allows an individual to competently articulate his or her duties without any problem. The knowledge in IT allows an individual to mitigate problems related to databases and troubleshoot network problems as well, and therefore, the system can run smoothly without any difficulty. It is also important to have a broader knowledge of [information security](#) because EMRs should be protected from cybercrime and any other unauthorized entry. However, understanding all sectors of information systems will be a tool to deliver to the company towards attaining the larger objectives.

References

Biondich, P., Deshen, M., Sharon, C., & Hamish, S. F. (2015). [Implementing electronic medical record systems](#) in developing countries. *Informatics in Primary Care* 2005;13:83-95,2-35.