



# Digital Transformation for the Industry: The Benefits of Moving CSIONet to the Cloud

Moving CSIONet, from physical servers, to Amazon Web Services (AWS), a cloud-based environment, brings multiple benefits:

Feature	Cloud Environment	Physical Server
<b>Technology</b>	<ul style="list-style-type: none"> <li>• Modern, state of the art technology: AWS is a dominant market player with a developed and mature platform.</li> <li>• Agile experimentation: Get to production quickly.</li> <li>• Access to other Amazon services.</li> <li>• Foundation to other cloud services at low costs and risks i.e., AI, Lab.</li> </ul>	<ul style="list-style-type: none"> <li>• Legacy physical server platform with traditional hosting that cannot be upgraded or customized automatically.</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Enhanced word class security: Higher levels of security and data integrity. Added security measures that reduce risk, and detect and address threats such as cybersecurity breaches to mitigate the risk of data loss.</li> <li>• Security is constantly monitored and upgraded with features so data is as secure as possible.</li> </ul>	<ul style="list-style-type: none"> <li>• Easier to infiltrate: Increased susceptibility to data loss during disaster situations.</li> </ul>
<b>Scalability &amp; Flexibility</b>	<ul style="list-style-type: none"> <li>• Ability to scale up or down easily and simple to meet emerging needs for resources such as bandwidth, storage, RAM etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot ramp up or down resources immediately whenever the need arises. Need to wait for physical hardware to be delivered and installed. No options for down scaling during low usage.</li> </ul>
<b>Deployment</b>	<ul style="list-style-type: none"> <li>• Faster deployment: Services can be deployed within just an hour or a few days.</li> </ul>	<ul style="list-style-type: none"> <li>• Slower Deployment: It can take weeks, months or years to strategically plan, buy, build and implement an internal IT infrastructure.</li> </ul>
<b>Disaster Recovery (DR)</b>	<ul style="list-style-type: none"> <li>• Cloud automatically backed up and no need for off-site recovery systems.</li> <li>• Provides better business continuity and incidence response.</li> <li>• Wider scale of DR options configurable with cloud offerings.</li> </ul>	<ul style="list-style-type: none"> <li>• Need to arrange and pay for back-up of data, with physical server housed elsewhere, which is an added expense.</li> </ul>
<b>Performance</b>	<ul style="list-style-type: none"> <li>• Improved speed and agility: The site performs far better than one hosted on a traditional physical server, and in a more cost-effective manner.</li> </ul>	<ul style="list-style-type: none"> <li>• Slower speed and not as agile.</li> <li>• Cost inhibitive for on-premises solutions with similar performance.</li> </ul>
<b>Cost-efficiency</b>	<ul style="list-style-type: none"> <li>• More cost efficient: Ability to audit usage to contract and expand (&amp; pay) for usage based on need.</li> </ul>	<ul style="list-style-type: none"> <li>• Not as cost efficient: Pay a fixed amount for the services whether you use them or not.</li> </ul>
<b>Access to Data</b>	<ul style="list-style-type: none"> <li>• Better analytics: More access to better data to stop guessing about capacity.</li> </ul>	<ul style="list-style-type: none"> <li>• Data not as robust. Focus on hardware vs. software and data.</li> </ul>
<b>Future Innovation</b>	<ul style="list-style-type: none"> <li>• Ability to innovate faster: Accelerates innovation and boosts efficiency to meet customer demands externally, while accommodating new technologies in the future.</li> <li>• Cloud providers consistently growing imbedded partner services to promote innovations.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited ability to innovate faster.</li> <li>• More difficult to integrate new solutions on physical platforms which limits innovation.</li> </ul>