



Compliance Component

DEFINITION

<i>Name</i>	Network Attached Storage – NAS
<i>Description</i>	<p>This document defines NAS and gives guidelines as to its deployment.</p> <p>NAS - The use of specialized devices that function simply as hard drives connected to a network. NAS devices typically consist of one or more hard drives in a housing that contains a simple operating system and a network connection. The use of NAS devices allows for cheaper and more easily expandable storage without requiring more complex and expensive multi-purpose servers to do the work of delivering files to network users.</p> <p>As Missouri government continues its journey on the digital path the amount of electronic data that needs to be stored continues to increase. We require effective ways to store, retrieve, maintain and protect this data. The current technology offers three basic options: Direct Attached Storage (DAS), Network Attached Storage (NAS) and Storage Area Networks (SAN).</p> <p>DAS is characterized as a single computer with a dedicated connection to a storage device. NAS is characterized as a network connected dedicated storage appliance. SAN is characterized as a network dedicated to storage devices that are in turn accessed by devices on another connected network (Ethernet for example).</p> <p>A server that provides other services in addition of storage, is not considered NAS for the purpose of this document.</p>
<i>Rationale</i>	<p>By defining deployment guidelines we hope to assist internal customers with the decision of which type of storage to deploy.</p> <p>DAS is typically used when access to the storage is limited to a single or very few computers. A windows server containing an array of disks that are in turn “served” to other computers meets this definition.</p> <p>NAS is typically used when storage is needed to be accessed by network connected computers and limited manageability is required.</p> <p>SAN is typically used when a higher level of manageability is required. Some examples are to provide storage for server clusters, volume expansion, and snap-shot copies.</p> <p>As to be expected, the cost of storage increases as the level of manageability increases (DAS < NAS < SAN).</p>

<i>Benefits</i>	<p>Benefits of using NAS are:</p> <ul style="list-style-type: none"> • Easy to deploy because of its limited configuration needs. • Since NAS is a dedicated, single function appliance, it has been designed to provide excellent performance. • Since it's a single purpose appliance, there is very little to maintain and provides a reduced security risk. • Lower costs when compared to SAN.
	<p>Cons of using NAS are:</p> <ul style="list-style-type: none"> • By definition, they do not provide additional services, such as printing. • Limited manageability when compared to SAN. • Typically costs more than DAS.

ASSOCIATED ARCHITECTURE LEVELS

<i>Specify the Domain Name</i>	Infrastructure
<i>Specify the Discipline Name</i>	Platform
<i>Specify the Technology Area Name</i>	Hardware
<i>Specify the Product Component Name</i>	N/A

COMPLIANCE COMPONENT TYPE

<i>Document the Compliance Component Type</i>	Guideline
<i>Component Sub-type</i>	Configuration

COMPLIANCE DETAIL

<i>State the Guideline, Standard or Legislation</i>	<p>NAS is storage that is set up with its own network address rather than being attached to the department computer that is serving applications to a network's workstation users. By removing storage access and its management from the department server, both application programming and files can be served faster because they are not competing for the same processor resources. The network-attached storage device is attached to a local area network (typically, an Ethernet network) and assigned an IP address. File requests can be mapped by the main server to the NAS file server or directly to the NAS device itself.</p>
	<p>NAS software can usually handle a number of network protocols, including Microsoft's Internetwork Packed Exchange and NetBEUI, Novell's Netware Internetwork Packed Exchange, and Sun Microsystems' Network File System. Configuration, including the setting of user access priorities, is usually performed using a Web browser.</p>
	<p>NAS hardware can use IDE, SATA, or SCSI hard disk drive technology.</p>
	<p>NAS should be considered for deployment when shared storage is desired and limited manageability is desired. NAS is very fast to deploy and very easy to maintain. Typically NAS is used in a small to medium sized location when additional storage is needed and other additional services are already present or not needed (print, web, etc.).</p>

Document Source Reference # <ftp://download.intel.com/design/network/ProdBrf/30370201.pdf>
<http://www.monster-isp.com/glossary/NAS.html>
http://searchstorage.techtarget.com/sDefinition/0%2C%2Csid5_gci214410%2C00.html

Compliance Sources

<i>Name</i>	Intel	<i>Website</i>	www.intel.com
<i>Contact Information</i>			
<i>Name</i>		<i>Website</i>	
<i>Contact Information</i>			
<i>Name</i>		<i>Website</i>	
<i>Contact Information</i>			
<i>Name</i>		<i>Website</i>	
<i>Contact Information</i>			

KEYWORDS

List Keywords NAS, Network Attached Storage, Storage, File server, DASD, disk

COMPONENT CLASSIFICATION

Provide the Classification *Emerging* *Current* *Twilight* *Sunset*

Sunset Date

COMPONENT SUB-CLASSIFICATION

Sub-Classification	Date	Additional Sub-Classification Information
<input type="checkbox"/> <i>Technology Watch</i>		
<input type="checkbox"/> <i>Variance</i>		
<input type="checkbox"/> <i>Conditional Use</i>		

Rationale for Component Classification

Document the Rationale for Component Classification

Migration Strategy

Document the Migration Strategy

Impact Position Statement

Document the Position Statement on Impact

CURRENT STATUS

Provide the Current Status *In Development* *Under Review* *Approved* *Rejected*

AUDIT TRAIL

<i>Creation Date</i>	1/6/05	<i>Date Approved / Rejected</i>	2/8/05
<i>Reason for Rejection</i>			
<i>Last Date Reviewed</i>		<i>Last Date Updated</i>	
<i>Reason for Update</i>			