

# Arrow Fusion<sup>SM</sup> Professional Services

## Standardized Implementation and Configuration Services for NetApp

### Overview

Arrow Fusion Professional Services provides a wide range of installation and configuration services backed by knowledgeable, experienced, and certified engineers, in order to deploy NetApp systems quickly and efficiently. A detailed Service Brief is available for each installation service. Service Briefs are categorized by product type and are inclusive of all available service options (and SKUs) for that product type.

### Eliminating the Primary Cause of Early System Failure

One of the primary causes of system failure during the early stages of the product lifecycle is improper installation and or configuration. Our NetApp-trained engineers can get you set up correctly from the start helping to ensure a consistent high quality installation that speeds time to deployment and provides the foundation for enhanced stability and performance. This enables the IT staff to stay focused on what's most important to your business and to ensure the early stages of your production lifecycle will go smoothly.

### Rapid Installation Services

Arrow Fusion provides rapid installation services that deliver a fully functioning NetApp storage system with the storage configured and ready to meet business requirements. Validating the functionality of the installed system requires that at least a baseline configuration be created consisting of a set of aggregates, volumes, and

LUNs, and including up to two host systems in the same location to verify read/write and failover/failback functionality.

### Rapid Installation Service Activities and Deliverables

- Unpack and inventory equipment
- Install equipment into racks
- Install physical connections (including high availability)
- Run Setup to configure all system's base settings (hostname, network settings, time zone, failover, and remote management and administration)
- Configure Autosupport for automatic disaster notification and staffing
- Run Wiregauge report to validate equipment connectivity across properly connected cables
- Install and verify purchased licenses
- Perform advanced system connectivity and protocol setup
- Perform Cluster failover configuration and testing (if clustered)
- Create base aggregates, volumes, LUNS, and shares (using maximums shown in Table 1 on the next page), to provide the foundation to meet initial business requirements.
- Connect to Support Console (for Support Edge Premium)
- Conduct Knowledge Transfer

Table 1 below describes all rapid installation services provided by Arrow Fusion professional services available for NetApp.

NetApp Controller	RIS Standard Configuration Parameters Included (maximum)					SKU
	Hosts	LUNS/Shares	Aggregates	Volumes	Shelf Installation	
FAS2000 series	2	2	2	2	None	SST-RIS-F2K-NAPS
FAS3000 series	2	8/16	4	8	2x DS14 or 1x DS4243	SST-RIS-F3K-NAPS
FAS6000 series	2	8/16	4	8	4xDS14 or 2x DS4243	SST-RIS-F6K-NAPS
V3000 series	2	8/8	4	4	2x DS14 or 1x DS4243	SST-RIS-V3K-NAPS
V6000 series	2	8/12	4	8	4x DS14 or 2x DS4243	SST-RIS-V6K-NAPS

Table 1: Base Rapid Installation Services for NetApp

Table 2 below describes the add-on services that that can be ordered in addition to the primary service if the size or scope of the required installation exceeds the maximum configuration parameters listed in Table 1.

RIS Add-on Option	Additional Quantity	SKU
Hosts	Up to 5	SST-RIS-H05-NAPS
	Up to 10	SST-RIS-H10-NAPS
	Up to 15	SST-RIS-H15-NAPS
LUNs / Shares	Up to 5	SST-RIS-L05-NAPS
	Up to 10	SST-RIS-L10-NAPS
	Up to 15	SST-RIS-L15-NAPS
Aggregates	Up to 5	SST-RIS-A05-NAPS
	Up to 10	SST-RIS-A10-NAPS
	Up to 15	SST-RIS-A15-NAPS
Volumes	Up to 5	SST-RIS-V05-NAPS
	Up to 10	SST-RIS-V10-NAPS
	Up to 15	SST-RIS-V15-NAPS
SnapMirror Relationships	Up to 5	SST-RIS-SM05-NAPS
	Up to 10	SST-RIS-SM10-NAPS
	Up to 15	SST-RIS-SM15-NAPS
SnapVault Relationships	Up to 5	SST-RIS-SV05-NAPS
	Up to 10	SST-RIS-SV10-NAPS
	Up to 15	SST-RIS-SV15-NAPS

Table 2: Add-on services options for Rapid Installation Services

Note: All installation services are scheduled and performed during normal local business hours.

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## Shelf Installation (DS14 and DS4243 disk subsystems)

Shelf installation can be ordered as an add-on to a rapid installation service as described earlier or can be ordered as a standalone service. SKUs are the same whether ordering a shelf installation as an add-on service or as a standalone service and are only dependent on the number of shelves being installed.

### Service Activities and Deliverables

- Inventory equipment
- Install rail kits and shelf
- Set Shelf ID's
- Set speed indicator (if fiber channel shelf)
- Power on shelf and follow the NDU procedure to hot-add the drives to the FAS
- Assign disk ownership to the head to own the drives
- Verify disk ownership of new drives

Table 3 below describes installation services available for DS14 and DS4243 disk shelves. When ordering shelf installation as an add-on, the quantity specified based on the SKU selected from Table 3 will be added to the quantity that is included with the rapid installation service.

Shelf	Quantity to be Installed (Total or Add-On)	SKU (Default Qty = 1 per SKU, Change Qty to match Total or Add-On required from column 2)
DS14	1-4	SST-DS14-04-NAPS
	5-8	SST-DS14-08-NAPS
	9-12	SST-DS14-12-NAPS
DS4243	1-4	SST-DS42-04-NAPS
	5-8	SST-DS42-08-NAPS
	9-12	SST-DS42-12-NAPS

Table 3: Shelf Installation Services

Note: All installation services, including onsite and remote services are scheduled and performed during normal local business hours.

## Head Swap Services

These services are designed to quickly and efficiently swap heads on multiple types of NetApp storage.

### Service Activities and Deliverables

- Prepare and deliver head swap migration plan detailing the steps specific to the customer environment
- Verify the version of Data ONTAP
- Document the existing physical layout (ports, cables, network interfaces)
- Shutdown NetApp equipment and perform head swap, adhering to best practices
- Install new controller and verify system can see the disks
- Enable cluster services (as needed)

Table 4 below describes the SKUs associated with performing a full head swap including base and add-on services. The SAN and migration head swap add-ons must include a head swap base service.

Description	SKU
NetApp Controller Head Swap Base Service (2 heads maximum)	SST-HSWP-BAS-NAPS
Head Swap SAN Add-on Service (10 TBs maximum)	SST-HSWP-SAN-NAPS

Table 4: Head Swap Services

## Data OnTap v7 Upgrade

This service provides the upgrade plan and path for going to the next highest available Data ONTAP version 7 product.

### Service Activities and Deliverables

- Review AutoSupport and upgrade advisor documents to plan upgrade path
- Download the desired version of ONTAP
- Install the new version of ONTAP on required controllers (Cluster/Non-Clustered)
- Verify the new version of software

Description	SKU
NetApp Data OnTap v7 Upgrade	SST-DONTAP7-NAPS

Table 5: Data OnTap v7 Upgrade

## Installation Services for NetApp Fiber Channel Switch

This service will ensure that Fiber Channel switches (maximum 2) are installed, implemented and configured correctly in the target environment.

### Service Activities and Deliverables

- Place switch in rack and cable
- Install licenses to activate ports
- Perform initial network configuration
- Integration into existing fabric or new fabric setup
- Connect new switch fiber channel ports to existing SAN fiber channel ports
- Create ISL between new switch and existing SAN switches
- Create new zones to add the NetApp WWPN's
- Create new zones for host to NetApp LUN access (up to 15 zones)
- Enable the zone sets on the switches
- Verify Connectivity to the hosts from the switch

Description	SKU
FC Switch Installation service	SST-FCSWITCH-NAPS

Table 6: Installation Services for NetApp Fiber Channel Switch

## Rapid Deployment Services

Table 7 below includes all available Arrow Fusion Rapid Deployment Services (RDS) for NetApp that deliver a full install of purchased equipment. These services are designed for rapid deployment, to help ensure that the installation services are completed correctly while minimizing any disruption in service of the associated storage resources.

Product / Service	Description	SKU
<b>DataFort</b>	Installation of DataFort devices. Includes implementation of the following if purchased: <ul style="list-style-type: none"> <li>• NetApp DataFort NAS</li> <li>• NetApp DataFort iSCSI</li> <li>• NetApp DataFort SAN</li> <li>• NetApp DataFort Tape</li> </ul>	
<b>Options</b>	• Implementation of new product	SST-DFORTIMP-NAPS
	• Upgrade of existing product	SST-DFORTUPG-NAPS
<b>Virtual Tape Library 300</b>	Rapid Deployment Service (RDS) delivers a backup solution on a NetApp® NearStore® VTL300 Bundle.	
<b>Options</b>	• VTL300 Rapid Deployment Service	SST-VTL300HD-NAPS
	• VTL300 Rapid Deployment Service – Promotional Head Install	SST-VTL300P-NAPS
<b>Virtual Tape Library 700</b>	Rapid Deployment Service (RDS) delivers a backup solution on a VTL700 Bundle.	SST-VTL700HD-NAPS
<b>Virtual Tape Library 1400</b>	Rapid Deployment Service (RDS) delivers a backup solution on a VTL1400 Bundle.	SST-VTL14KHD-NAPS
<b>SnapManager for Sharepoint</b>	SnapManager for Microsoft Office SharePoint Server (SnapManager for SharePoint) Rapid Deployment Service (RDS) for small and medium SharePoint Server 2007 farms. This service is designed to quickly and efficiently deploy your backup solution of SharePoint Server 2007 on NetApp® storage.	SST-MOSSIMPL-NAPS

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<p><b>SnapManager for Exchange</b></p> <p><b>Options</b></p>	<p>Microsoft Exchange Implementation Service for a single NetApp storage array and either Microsoft Exchange 2003 or 2007 servers. This service is designed to quickly and efficiently deploy data management and backup solution of Exchange Server 2003 or 2007 on NetApp storage.</p> <ul style="list-style-type: none"> <li>• SnapManager for Microsoft Exchange ("SME") Implementation – Base <ul style="list-style-type: none"> <li>○ Services is the base install of Snap Manager</li> <li>○ Does not include the setup of Exchange</li> <li>○ Includes the setup of Microsoft Cluster Services if the HW exists</li> </ul> </li> <li>• Single Mail Box Recovery ("SMBR") – Add on Service Component</li> <li>• Disaster Recovery and SME Business Continuance for 1 host or cluster – Add on Service Component</li> <li>• Disaster Recovery and SME Business Continuance for 2 hosts or clusters – Add on Service Component</li> <li>• LCR/CCR with DR for Exchange 2007 configures the software using 1 cluster – Add on Service Component</li> <li>• LCR/CCR with DR for Exchange 2007 configures the software using 2 clusters – Add on Service Component</li> <li>• Data Migration of up to 150GB of Exchange data – Add on Service Component</li> <li>• Backup Set Presentation for Virtual Tape Library ("VTL") /Tape – Add on Service Component: Installs and configures backup of exchange using SnapManager using the existing backup hardware</li> <li>• Exchange Server or Cluster – Add on Service Component: increases the base service to add additional exchange servers and active /active storage arrays</li> </ul>	<p>SST-SMEBASE-NAPS</p> <p>SST-SMESMBR-NAPS</p> <p>SST-SMEDRBC1-NAPS</p> <p>SST-SMEDRBC2-NAPS</p> <p>SST-SMELRCR1-NAPS</p> <p>SST-SMELRCR2-NAPS</p> <p>SST-SMEMIG-NAPS</p> <p>SST-SMEBK-NAPS</p> <p>SST-SMEHOST-NAPS</p>
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<b>SnapManger for SQL</b>	<p>SnapManager for Microsoft SQL Implementation Rapid Deployment Service for a single NetAppstorage array and either Microsoft SQL 2000, 2005 or 2008 servers. This service is designed to quickly and efficiently deploy data management and backup solution of SQL Server on NetAppstorage.</p>	
<b>Options</b>	<ul style="list-style-type: none"> <li>• SnapManager for Microsoft SQL Implementation – Base             <ul style="list-style-type: none"> <li>◦ Does not include the installation or configuration of the SQL server(s)</li> </ul> </li> <li>• Disaster Recovery ("DR") Add-on Service Component: includes the configuration and testing of the recovery of SQL database servers</li> <li>• Data Migration Add-on Service Component: performs the migration of up to 150GB of data from one SQL server to another</li> <li>• Backup Readiness for VTL/Tape Add-on Service Component: performs the backup as a demonstration of up to 50GB of data</li> <li>• SQL Server or Cluster - Add-on Service Component sets up NetApp storage for 1 new SQL cluster</li> <li>• SQL Server or Cluster - Add-on Service Component sets up NetApp storage for 2 new SQL clusters</li> </ul>	<p>SST-SMSQLBAS-NAPS</p> <p>SST-SMSQLHST-NAPS</p> <p>SST-SMSQLMIG-NAPS</p> <p>SST-SMSQLBK-NAPS</p> <p>SST-SMSQLDR1-NAPS</p> <p>SST-SMSQLDR2-NAPS</p>

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## Specialty Installation Services

Table 8 below includes available Arrow Fusion specialty installation services for NetApp DataFort and Virtual Tape Library products.

Product	SKU
DataFort	SST-DataFort-NAPS
Virtual Tape Library Hardware	SST-INST-VTL-NAPS

Table 8: Custom Installation Services for NetApp

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