ArcGIS® Data Appliance 7.1

New User
Quick Start Guide

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Overview

The purpose of the Quick Start Guide is to walk you quickly and easily through the setup of ArcGIS® Data Appliance 7.1. This Quick Start Guide is for use with ArcGIS Server. The setup consists of the following steps:

Before Starting

ArcGIS Server 10.4.1 or later is required for ArcGIS Data Appliance 7.1. If you purchased a license for ArcGIS Data Appliance with ArcGIS Server, install ArcGIS Server before performing the steps in this Quick Start Guide. For more information on what's supported, visit links.esri.com/data-appliance/7.1/system-requirements.

Important: It is imperative that care and precautions be taken when handling the data collection hard drives. The hard drives are sensitive to shock as well as electrostatic discharge. Make sure precautions are taken to eliminate any built-up static. The use of a grounding strap is highly recommended while you handle the hard drives.

1 Unpack the Components

ArcGIS Data Appliance is delivered in multiple boxes containing the data collection hard disk drives.

If you purchased . . .	You received . . .
ArcGIS Data Appliance World Basic	Collections A and B
ArcGIS Data Appliance World Standard	Collections B, C, and D
ArcGIS Data Appliance World Advanced	Collections B, C, and E
ArcGIS Data Appliance North America Standard	Collections B, F, and G
ArcGIS Data Appliance North America Advanced	Collections B, F, and H

See arcgis_data_appliance.pdf on the ArcGIS Data Appliance 7.1 Help Documentation DVD for details on these collections.

For details on the hardware components, see **arxys.com/company/support** under Arxys Support Documentation, and select the Esri ArcGIS Products tab.

2 Install the Data Appliance

ArcGIS Data Appliance ships with side rails that slide into the adjustable rails installed in the computer equipment rack. Depending on the depth of your rack cabinet, adjustments to the sliding rails may be required. Use the mounting screws provided to attach the sliding rails to your cabinet. Install ArcGIS Data Appliance into the computer equipment rack without the data collection hard disk drives installed.

See Arxys's Support page, https://www.arxys.com/company/support/, for additional documentation with detailed instructions.

A. Install the data collection hard disk drives with Data Appliance powered off. Handle each drive with care and observe electrostatic discharge (ESD) best practices when handling the drives.
B. Each data collection hard drive is labeled according to the collection it belongs to, as well as the number of drives contained in each data collection. Install the data collections in alphabetical succession (i.e., Collection A, Collection B, Collection C, etc.). Install the hard drives for each collection sequentially (i.e., Disk 1 of 8, Disk 2 of 8, etc.). The installation process varies according to which data collections you purchased. Insert the drive tray into the chassis. Press the drive carrier handle closed until it clicks into place.
C. Verify that all drives from each set are present. If you find that a drive is missing, **immediately stop the installation procedure and contact Arxys technical support.**
D. Make sure all drives from the data collections are installed in ArcGIS Data Appliance.

3 Cable the Data Appliance

ArcGIS Data Appliance hardware requires two AC power sources. Two power cords are included. Connect both power cords. Connect a monitor to the video port as well as a keyboard and mouse to their respective USB ports. Network connectivity is required during the operation of ArcGIS Data Appliance. Plug an Ethernet cable into the Ethernet port of Data Appliance. For detailed instructions, see **arxys.com/company/support** under Arxys Support Documentation, and select the Esri ArcGIS Products tab.

4 Power On Data Appliance

To turn on ArcGIS Data Appliance, press the power button located on the front of Data Appliance. The Microsoft® Windows Server 2019 operating system performs a number of system checks to verify the integrity of the file system. During this time, the hard drive activity LEDs on Data Appliance will blink. Allow Data Appliance to boot uninterrupted.

5 System Licensing and Activation

Once the system boots and reaches the final section of Windows Setup, follow the on-screen instructions.

A. Select the appropriate Country/Region, App Language, and Keyboard layout. Click **Next**.
B. Type the product key found on the Microsoft Certificate of Authenticity (COA) label located on the top front left corner of the system and click **Next**.
C. Accept the Microsoft Software License Terms by clicking **Accept**.
D. Follow the instructions to set the administrative password for the system and click **Finish**.
E. At the login screen, press **Ctrl+Alt+Delete**.
F. Select the **Administrator** account and log in to display the Windows desktop.

Note: Refer to the ArcGIS Data Appliance User Guide for Windows on the Arxys website for information on activating Windows without internet access or for additional details on system setup.

6 Apply Windows Updates and Configure Network Settings

Read the following before continuing: ArcGIS Data Appliance ships with the Microsoft Windows Server 2019 operating system. Microsoft routinely releases updates and patches to improve stability and security. Any updates released after ArcGIS Data Appliance has shipped will need to be applied.

Consult your network administrator for the information needed to configure the network with a static IP address on the Data Appliance: IP address, subnet mask, gateway, and DNS server

A. Log in to ArcGIS Data Appliance as **Administrator**.
B. On the Server Manager Dashboard, select **Local Server** from the menu on the left.
C. Locate **Ethernet**, and click the link to display the network connections list.
D. Right-click the **Ethernet 1** Ethernet connection, click **Properties**, and double-click **Internet Protocol Version 4 (TCP/IPv4)**.
E. Type the network information in the appropriate sections and click **OK**. The network setup is complete.

Note: Refer to the ArcGIS Data Appliance User Guide for Windows on the Arxys website for additional details on system setup.

7 Verify the Data Collections

Before utilizing the data collections, the health of the RAID arrays must be verified. ArcGIS Data Appliance ships with the LSI Storage Authority (LSA) utility preinstalled. This utility will be used to verify the status of the datasets.

A. Log in to ArcGIS Data Appliance as **Administrator**.
B. From the desktop, locate the **Launch LSA** shortcut and double-click it to start the utility.
C. Select the discovered server and select the option to **Sign In**.
D. Type the ArcGIS Data Appliance Administrator user name and password and click **Sign In**.
E. The LSI Storage Authority Dashboard is displayed.
F. If the status for the collections are **Optimal** and green, the arrays are healthy and ready to use. If something other than **Optimal** is displayed, **immediately stop and contact Arxys technical support**.
G. Exit the LSI Storage Authority utility.

8 Create ArcGIS Users on Data Appliance

The ArcGIS user on ArcGIS Server must be created on ArcGIS Data Appliance.

A. Log in to ArcGIS Data Appliance as **Administrator**.
B. Right-click the **Start** menu and select **Computer Management**.
C. In the Computer Management application, in the left pane, click **Local Users and Groups** to expand the tree, and click the **Users** folder. On the main pane, right-click and select **New User**. The New User wizard is displayed.
D. Use the New User wizard to create the following user. The password must be configured to match the password for the respective account on ArcGIS Server, and the password must be set to never expire.

User Name	Full Name	Description
arcgis	ArcGIS Server Account	Account to perform a variety of functions in support of the GIS server

E. Click **Create** to create each new user on ArcGIS Data Appliance.

Create Shares

ArcGIS Data Appliance must be configured to share the data collections.

A. Log in to ArcGIS Data Appliance as **Administrator**.
B. Start **Server Manager** and click **Select the Local Server > Tasks > Computer Management**.
C. In the Computer Management application, click **Shared Folders** to expand the tree, and right-click the **Shares** folder. Select **New Share**.
D. In the Create A Shared Folder Wizard, click **Next** to begin.
E. For Folder path, click **Browse** and navigate to the hard drive with the data collection (usually drive E). Select the **cache** folder (or the **source _documents** folder) and click **OK**.
F. Click **Next**.
G. Each product option available at version 7.1 comes with more than one collection of drives. Each collection requires uniquely named shares for the cache and source documents folders. In the Name, Description, and Settings dialog box, type a share name and a description. Use the following naming convention for your cache shares and source document shares according to the product option you purchased.

Collection	Folder	Share Name	Description
Collection A	\CollectionA_v7.1\cache	CollectionA_cache	Collection A Cache
	\CollectionA_v7.1\source_documents	CollectionA_source_documents	Collection A Source Documents
Collection B	\CollectionB_v7.1\cache	CollectionB_cache	Collection B Cache
	\CollectionB_v7.1\source_documents	CollectionB_source_documents	Collection B Source Documents
Collection C	\CollectionC_v7.1\cache	CollectionC_cache	Collection C Cache
	\CollectionC_v7.1\source_documents	CollectionC_source_documents	Collection C Source Documents
Collection D	\CollectionD_v7.1\cache	CollectionD_cache	Collection D Cache
	\CollectionD_v7.1\source_documents	CollectionD_source_documents	Collection D Source Documents
Collection E	\CollectionE_v7.1\cache	CollectionE_cache	Collection E Cache
	\CollectionE_v7.1\source_documents	CollectionE_source_documents	Collection E Source Documents
Collection F	\CollectionF_v7.1\cache	CollectionF_cache	Collection F Cache
	\CollectionF_v7.1\source_documents	CollectionF_source_documents	Collection F Source Documents
Collection G	\CollectionG_v7.1\cache	CollectionG_cache	Collection G Cache
	\CollectionG_v7.1\source_documents	CollectionG_source_documents	Collection G Source Documents
Collection H	\CollectionH_v7.1\cache	CollectionH_cache	Collection H Cache
	\CollectionH_v7.1\source_documents	CollectionH_source_documents	Collection H Source Documents

For **Offline setting**, accept the default.
H. Click **Next**.
I. Select the **Customize permissions** option and click **Custom**.
J. In the Customize Permissions dialog box, click **Add**.
K. In the Select Users or Groups dialog box, click **Advanced**. The Select Users or Groups dialog box expands.
L. Click **Find Now** to display a list of all local users. Press the Ctrl key and click the Administrator user and the arcgis user to highlight them. Then, with both users highlighted, click **OK** above the Search results area. The dialog box reverts to a smaller size.
M. The two users you just selected should be listed under Enter the object names to select. Click **OK**.
N. Make sure the permissions for the users and groups are set to Full Control.
O. Repeat steps 9C through 9N for the source documents folder.

⑩ Configure the Cache Directories

ArcGIS Server maintains a list of directories in which it can find map cache tiles. You need to explicitly add the Data Appliance cache directories to this list.

A. Log in to ArcGIS Server using the ArcGIS Data Appliance data account with administrative privileges.
B. Start ArcGIS Server Manager and log in using your Primary Site Administrator account.
C. Click the **Site** tab.
D. From the **GIS Server** tab on the left, click **Directories**.
E. Click the **Add Directory** button.
F. Provide a name, for example, CollectionA_Cache. From the **Type** list, choose **Cache**.
G. For **Location**, provide the **path** to the cache folder on the ArcGIS Data Appliance collection you made when you created shares in step 9; for example, \\ARCGISDATAAPP\Collection<X>_cache. You do not need to specify **Description**, **Cleaning Mode**, or **Maximum File Age**.
H. Click **Add** to add the directory.
I. Repeat steps E through H for each collection you created a cache directory for when you created shares.

⑪ Publish Services

Important: If you are publishing the World_Imagery service for World Standard (on Collection D), World Advanced (on Collection E), North America Standard (on Collection G), or North America Advanced (on Collection H), you need to configure ArcGIS Server to use the source document directories before you publish the World_Imagery service. For more information, see arcgis_data_appliance.pdf on the *ArcGIS Data Appliance 7.1 Help Documentation* DVD.

The following instructions apply to map services. Information about other services can be found in the help file on the *ArcGIS Data Appliance 7.1 Help Documentation* DVD by opening arcgis_data_appliance.pdf.

Using ArcGIS Server Manager, you can publish a service definition file (.sd) as a service. To publish a service definition using Server Manager, follow these steps for each map service that you want to create:

A. Open ArcGIS Server Manager and sign in.
B. Click **Services > Manage Services > Publish Service**.
C. Browse to the Collection<X>_source_documents > service_definitions folder on the Data Appliance data collection; for example, \\ARCGISDATAAPP\Collection<X>_source_documents\service_definitions.
D. Select the **service definition** you want to publish; for example, World_Imagery.sd, and click **Open**. See the Services Reference Guide for 7.1 after step 12 of this document for a list of the Data Appliance services.
E. Click **Next**.

⑪ Publish Services (continued)

F. By default, the service definition is published in the server folder specified in the service definition configuration. You must publish the service definition in this root folder.
G. If Build cache automatically when service starts is checked, uncheck it. Click **Next**.
Note: We recommend that all your service names match the names of the service definition file; you should not change a service name to a different name.
H. Optionally, choose to **enable** or **disable capabilities** for your service definition.
I. Click **Publish** to publish the service definition as a service. The new map service appears in the list of available services.

```
World_Imagery ✎ (Map Service) ⬛ ▤                    ▲ 🔓 ▶ ■ ✕
imagery, satellite, aerial, 500m (World), 15m (World)
Status:              Started
Instances Running:        1
Instances in Use:         0
Maximum Instances:        2
```

The publishing process uses the first directory in the server's list of cache directories. You need to change it to the Data Appliance cache directory created previously.
J. Click the **Stop** button to the right of the service name to stop the service.
K. Click the **Edit** button to edit the service properties.
L. Click **Caching** and change the **cache directory** setting to reference the Data Appliance collection.
M. Click **Save** to save your changes, and click the **Start** button to restart the service.
N. Repeat this process for any other map services you want to publish.

⑫ Use Services

For specific instructions on how to connect to and use the services, see the appropriate user guide for the ArcGIS application you are using.

Additional information can be found in the help file on the ArcGIS *Data Appliance 7.1 Help Documentation* DVD by opening arcgis_data_appliance.pdf.

Services Reference Guide for 7.1

Map Services	World Elevation and Geoprocessing Services	Geocode Service
Antarctic_Imagery	Elevation[1]	Esri_Places_World[1]
Arctic_Imagery	ElevationSync[1]	
Arctic_Ocean_Base	Terrain[1]	
Arctic_Ocean_Reference	Terrain3D[1]	
NatGeo_World_Map		
USA_Topo_Maps[2]		
World_Boundaries_and_Places		
World_Boundaries_and_Places_Alternate[2]		
World_Dark_Gray_Base		
World_Dark_Gray_Reference		
World_Hillshade		
World_Hillshade_Dark New		
World_Imagery		
World_Light_Gray_Base		
World_Light_Gray_Reference		
World_Ocean_Base		
World_Ocean_Reference		
World_Physical_Map[2]		
World_Street_Map		
World_Topo_Map		
World_Transportation		

[1]Refer to the *ArcGIS Data Appliance 7.1 Help Documentation* DVD for more information on publishing these services.
[2]In Mature Support beginning at this release. No plans to retire.

Resources

Arxys provides several reference documents. These are available at **arxys.com/company /support/** under the Arxys Support Documentation on the Esri ArcGIS Products tab.

The ArcGIS *Data Appliance 7.1 Help Documentation* DVD is included in the box with your data collection drives. Refer to the help for additional details.

For an up-to-date online help system, system requirements, information on licensing, and more, visit **links.esri.com/data-appliance/7.1/tech-docs**.

Support

Esri Support
For information regarding the configuration and setup of ArcGIS services and usage, visit **support.esri.com/en/contact-tech-support**.

For the most current information about all ArcGIS products, visit the Documentation for ArcGIS website at **doc.arcgis.com**.

Arxys Support
For information and support regarding the ArcGIS Data Appliance hardware, contact Arxys using the following options:

Phone: 800-257-1666
Email: support@arxys.com
Website: support.arxys.com
Hours: Monday–Friday, 8:00 a.m.–5:00 p.m. (Pacific time)