



**NetApp Element**

# **.NET SDK Release Notes**

Version 12.3

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# Introduction

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The NetApp Element .NET SDK is a collection of libraries that facilitate integration and orchestration between proprietary systems and third-party applications. The .NET SDK allows developers to deeply integrate Element storage-based system API with the C# or Visual Basic programming languages. The NetApp Element .NET SDK reduces the amount of additional coding time required for integration.

The intended audience for this document is C# or Visual Basic developers who are responsible for integrating Element storage functionality into other applications.

**Note:** All version 12.3 SDK languages have identical Element storage functionality and available APIs.

# Compatibility and dependencies

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The Element .NET SDK is compatible with and depends on specific releases of software.

**Compatibility**

Component	Version
.NET Core	2.2
Element software	11.0 - 12.3

**Dependencies**

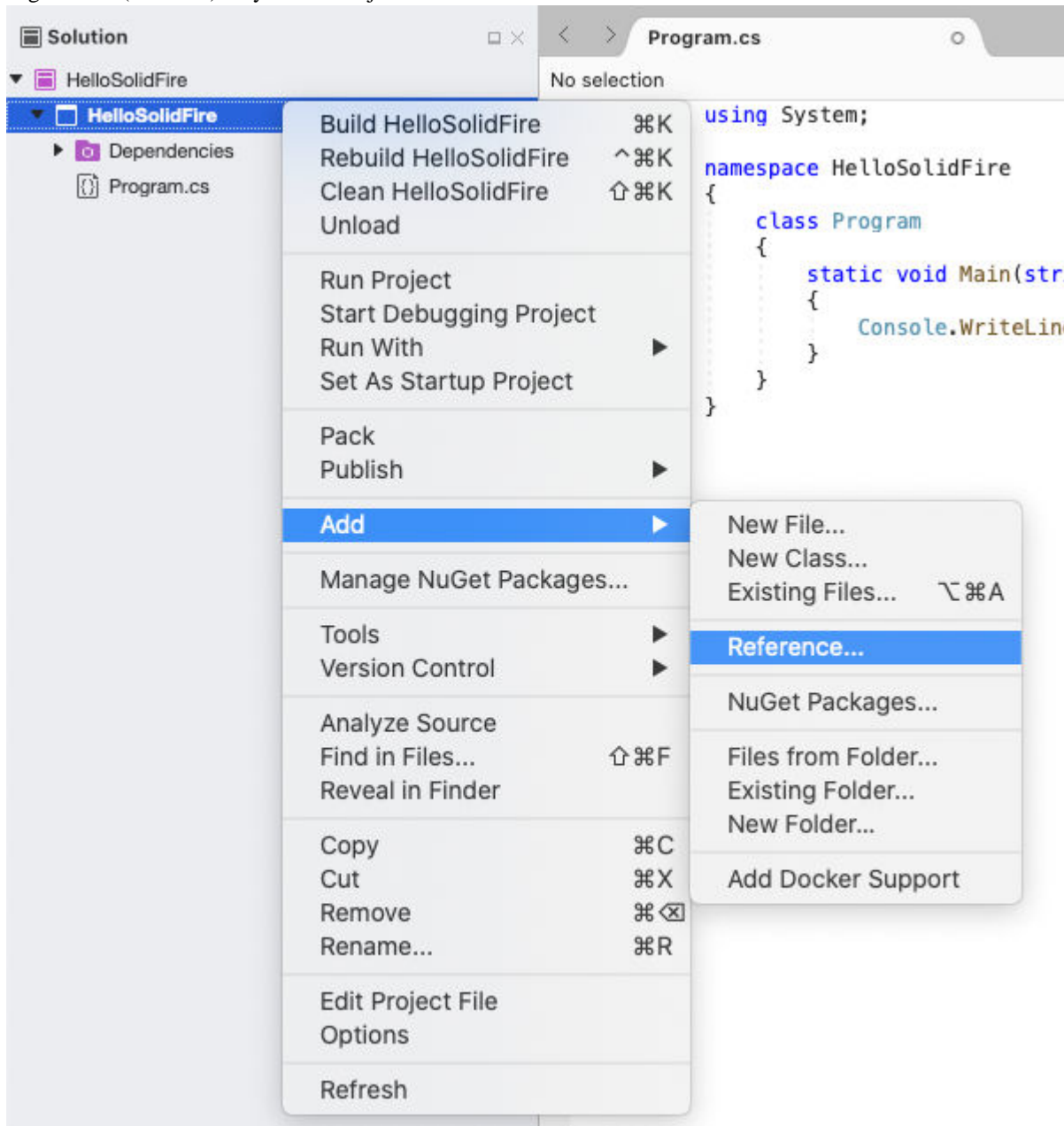
Component	Version
Newtonsoft.Json	11.0.2

## Installing the NetApp Element .NET SDK

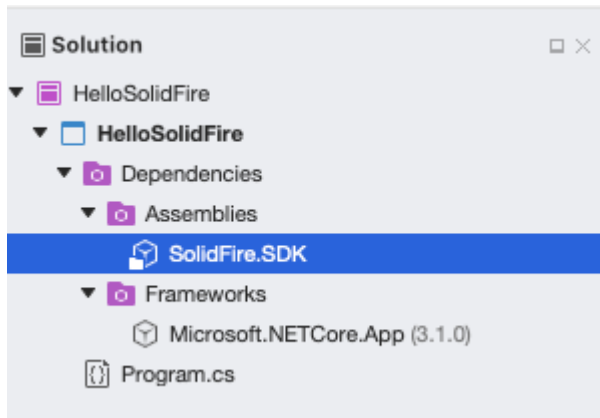
Complete the following steps to bring the NetApp Element .NET SDK into your environment.

### Steps

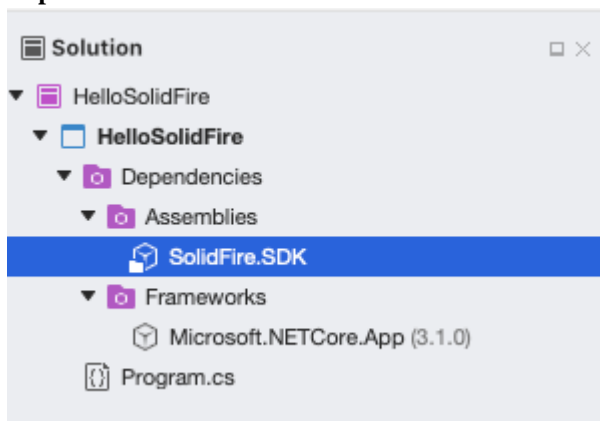
1. Download the `solidfire-sdk-dotnet.tar.gz` from the [NetApp Support Site](#).
2. Unzip the downloaded file into your directory.
3. Right Click (⌘ Click) on your C# Project and select **Add > Reference...**



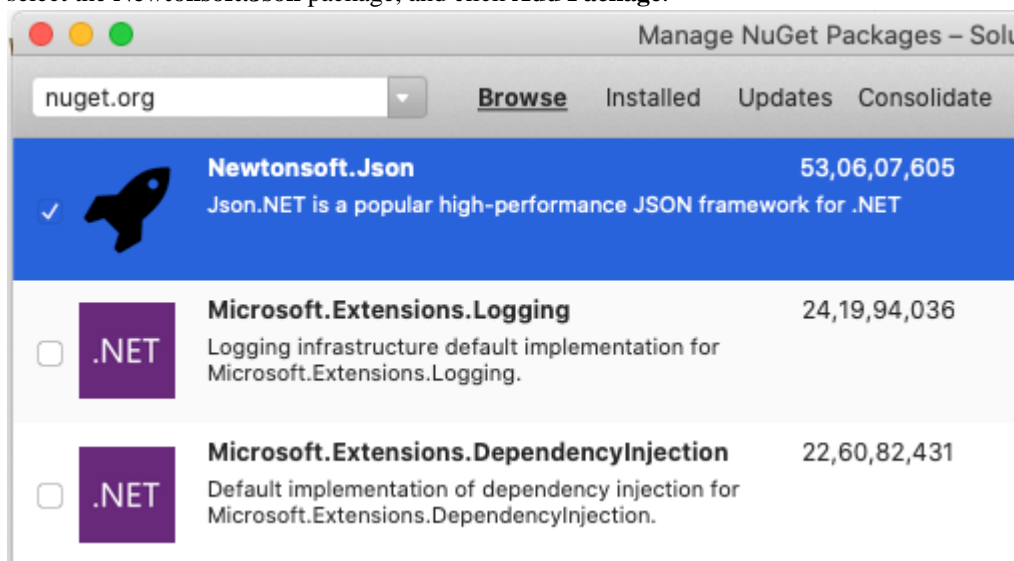
4. From the **References** window, open the **.Net Assembly** tab and select **browse**.



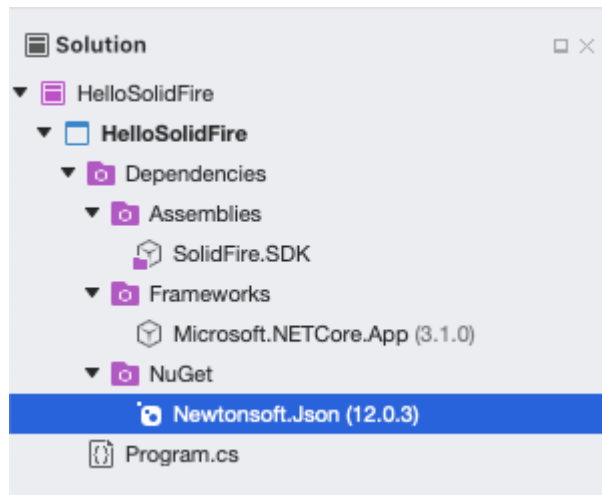
5. Select the **SolidFire.SDK.dll** from the unzipped package and click **OK**.
6. Confirm that the **SolidFire.SDK.dll** has been successfully added to the **Project > Dependencies > Assemblies** folder.



7. Install the **Newtonsoft.Json** dependency package from [NuGet](https://www.nuget.org).
8. From the **Project** menu, select **Manage NuGet Packages....**
9. In the **Manage NuGet Packages** window, select the **nuget.org** package source, search and select the **Newtonsoft.Json** package, and click **Add Package**.



10. Confirm that the package has been added to the **Project > Dependencies > NuGet** folder.



## What's new in this release

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The Element SDK version 12.3 release expands supported NetApp Element software API methods through version 12.3. This release also contains revised parameters for existing methods.

### NetApp Element SDK API methods

NetApp Element SDK version 12.3 provides Element storage API methods. The availability of each API depends on the version of Element software.

- [New API methods for Element software 12](#) on page 8
- [New API methods for Element software 11](#) on page 9

For more detail on Element storage API methods, refer to the *Element API Reference Guide* for your operating system.

### New API methods for Element software 12

NetApp Element SDK version 12.3 includes Element 12 methods.

The following version 12.3 API methods have been added to all SDK languages:

#### Node

- GetPatchInfo
- ListNetworkInterfaceStats

#### Encryption

- GetEncryptionAtRestInfo
- GetSoftwareEncryptionAtRestInfo
- RekeySoftwareEncryptionAtRestMasterKey

The following version 12.2 API methods have been added to all SDK languages:

#### Cluster

- DisableMaintenanceMode
- EnableMaintenanceMode
- GetLicenseKey
- SetLicenseKey

The following version 12.0 API methods have been added to all SDK languages:

#### Cluster

- DeleteAuthSession
- DeleteAuthSessionsByClusterAdmin
- DeleteAuthSessionsByUsername
- GetBinAssignmentProperties
- GetProtectionDomainLayout
- ListActiveAuthSessions
- ListAuthSessionsByClusterAdmin
- ListAuthSessionsByUsername
- SetProtectionDomainLayout

#### IDP

- AddIdpClusterAdmin
- CreateIdpConfiguration



- DeleteIdpConfiguration
- DisableIdpAuthentication
- EnableIdpAuthentication
- GetIdpAuthentication
- ListIdpConfigurations
- UpdateIdpConfiguration

## New API methods for Element software 11

NetApp Element SDK version 12.3 includes Element 11 methods.

The following version 11.8 API methods have been added to all SDK languages:

### Cluster

- CreateClusterInterfacePreference
- CheckProposedNodeAdditions
- DeleteClusterInterfacePreference
- GetActiveTlsCiphers
- GetClusterInterfacePreference
- GetClusterStructure
- GetSupportedTlsCiphers
- ListClusterInterfacePreferences
- ListProtectionDomainLevels
- ModifyClusterInterfacePreference
- ResetSupplementalTlsCiphers
- SetClusterStructure (Not supported in Python SDK and the CLI)
- SetSupplementalTlsCiphers
- TestAddressAvailability

### Node

- CheckProposedCluster
- ControlPower
- DisableAutoIp
- EnableAutoIp
- GetLldpConfig
- GetNodeFipsDrivesReport
- SetLldpConfig

### Security

- AddKeyServerToProviderKmp
- CreateKeyProviderKmp
- CreateKeyServerKmp
- CreatePublicPrivateKeyPair
- DeleteKeyProviderKmp
- DeleteKeyServerKmp
- GetClientCertificateSignRequest
- GetFipsReport
- GetKeyProviderKmp
- GetKeyServerKmp
- ListKeyProvidersKmp
- ListKeyServersKmp

- `ModifyKeyServerKmip`
- `RemoveKeyServerFromProviderKmip`
- `TestKeyProviderKmip`
- `TestKeyServerKmip`

### **SnapMirror**

- `AbortSnapMirrorRelationship`
- `BreakSnapMirrorRelationship`
- `CreateSnapMirrorEndpointUnmanaged`
- `CreateSnapMirrorRelationship`
- `CreateSnapMirrorVolume`
- `DeleteSnapMirrorRelationships`
- `GetOntapVersionInfo`
- `GetSnapMirrorClusterIdentity`
- `InitializeSnapMirrorRelationship`
- `ListSnapMirrorAggregates`
- `ListSnapMirrorLuns`
- `ListSnapMirrorNetworkInterfaces`
- `ListSnapMirrorNodes`
- `ListSnapMirrorPolicies`
- `ListSnapMirrorRelationships`
- `ListSnapMirrorSchedules`
- `ListSnapMirrorVolumes`
- `ListSnapMirrorVservers`
- `ModifySnapMirrorEndpointUnmanaged`
- `ModifySnapMirrorRelationship`
- `QuiesceSnapMirrorRelationship`
- `ResumeSnapMirrorRelationship`
- `ResyncSnapMirrorRelationship`
- `UpdateSnapMirrorRelationship`

### **SSH sessions**

- `DisableClusterSSH`
- `EnableClusterSSH`
- `GetClusterSSHInfo`

# Known issues

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The following APIs are not supported in the Element .NET SDK version 12.3 release.

API Name	Description
TestDrives	The SDK is unable to parse the response received from the cluster.
CheckPingOnVlan	The SDK is unable to parse the response received from the cluster.

## Where to find product documentation and other information

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You can learn more about using and managing NetApp HCI and SolidFire all-flash storage from the resources available in the Documentation Centers and Resources pages for both products.

In the Documentation Centers, you can also find information about hardware installation and maintenance, additional content resources available, links to known issues and resolved issues, and the latest release notes. On the Resources pages, you can find links to data sheets, technical reports, white papers, and videos.

- [\*NetApp HCI Documentation\*](#)
- [\*NetApp HCI Documentation Center\*](#)
- [\*NetApp HCI Resources page\*](#)
- [\*SolidFire and Element 12.3 Documentation Center\*](#)
- [\*SolidFire and Element 12.2 Documentation Center\*](#)
- [\*SolidFire and Element 12.0 Documentation Center\*](#)
- [\*SolidFire and Element 11.8 Documentation Center\*](#)
- [\*SolidFire and Element 11.7 Documentation Center\*](#)
- [\*SolidFire and Element 11.5 Documentation Center\*](#)
- [\*SolidFire Resources page\*](#)

## Contact NetApp Support

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If you need help with or have questions or comments about NetApp products, contact NetApp Support.

- Web:  
[mysupport.netapp.com](https://mysupport.netapp.com)
- Phone:
  - 888.4.NETAPP (888.463.8277) (US and Canada)
  - 00.800.44.638277 (EMEA/Europe)
  - +800.800.80.800 (Asia/Pacific)

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