



Versa SASE Client Open Source Software Support

 *For supported software information, click [here](#).*

This article describes the open source software components that the Versa SASE client uses for Android, iOS, MacOS, and Windows operating systems (OS).

Open Source Software in SASE Client for Android

The following table describes the open source software that the SASE client uses for Android.

Name	Release	Description
Android Material	1.7.0	Use APIs for Material Design specification on devices running API 14 or later.
Android Jetpack Libraries		
<ul style="list-style-type: none"> androidx.sqlite 	2.3.1	Android database.
<ul style="list-style-type: none"> androidx.preference:preference-ktx 	1.2.0	Kotlin extensions for preferences that manage the user interface and interact with storage.
<ul style="list-style-type: none"> androidx.biometric 	1.0.0-alpha04	Tracks Android device biometrics status.
<ul style="list-style-type: none"> androidx.core:core-ktx 	1.9.0	Kotlin extensions for "core" artifact.
<ul style="list-style-type: none"> androidx.security-crypto 	1.1.0-alpha06	Manage keys safely, and encrypt files and sharedpreferences.
<ul style="list-style-type: none"> androidx.work-runtime 	2.8.1	Android WorkManager runtime library.
Appcompat	1.5.1	Provides backward-compatible implementations for UI-related Android SDK functionality, including dark mode and Material Theming.
bcpkix-jdk15to18 (CA certificate - AIA URL parsing)	1.71	Java APIs for CMS, PKCS, EAC, TSP, CMP, CRMF, OCSP, and certificate generation. This jar contains APIs for JDK 1.5 to JDK

		1.8. You can use these APIs in conjunction with a JCE/JCA provider, such as the one provided with Bouncy Castle Cryptography APIs.
com.github.kenglxn.QRGen:android	2.6.0	Generates simple QR code API for Java built on top of ZXING.
Commons-validator	1.7	Provides building blocks for client and server side data validation. You can use this standalone or with a framework such as Struts.
Fasterxml	2.12.1	Core Jackson processing abstraction (streaming API) implementation for JSON.
Fasterxml Databind	2.12.1	General data-binding functionality for Jackson that works on core streaming API.
Fasterxml Dataformat XML	2.12.1	Data format extension for Jackson that offers alternative support to serialize POJOs as XML and deserializing XML as POJOs.
Glide	4.14.2	A fast image loading library for smooth scrolling.
Google Android Flexbox	3.0.0	Flexbox for Android.
Google Guava	31.1-jre	Suite of core and expanded libraries that include utility classes, Google's collections, and I/O classes.

Gson	2.1	Serializes or deserializes JSON.
Intuit/sdp	1.1.0	Provides scalable DP that scales with the screen size.
Java-WebSocket	1.5.3	A barebones WebSocket client and server implementation written in Java.
Jetbrains/Kotlin stdlib	1.7.10	Kotlin Standard Library.
Lombok	1.18.24	A compile-time library that automatically generates getters, setters, equals, hashCode, toString methods, and a facility for automatic resource management.
net.zetetic:android-database-sqlcipher	4.5.4	SQLite plugin for full database encryption.
OKHTTP	4.9.1	HTTP client for Java and Kotlin.
OKHTTP Logging Interceptor	4.9.1	Logging interceptor of the HTTP client for Java and Kotlin.
org.json	20230618	Converts JSON and XML, HTTP headers, Cookies, and CDL.
play-services-ads-identifier (for "OPSWAT" local library)	18.0.1	Ads identifier for Play services.
Retrofit	2.9.0	REST client for API calls to capture JSON response from web service or web API.

Retrofit Json Converter	2.9.0	Retrofit converter that uses JSON to serialize.
Retrofit SimpleXML Converter	2.9.0	Retrofit converter that uses simple XML to serialize.
Strongswan	5.9.2	Open source, modular, and portable IPsec-based VPN solution.
Zip4j	2.7.0	Zips files and streams.

Open Source Software in SASE Client for iOS

The following table describes the open source software that the SASE client uses for iOS.

Name	Release	Description
Alamofire	4.7	HTTP networking library written in Swift.
AN1Decoder	1.8.0	ASN1 DER Decoder for X.509 certificate.
Criollo	1.0.0	Cocoa web framework and HTTP server for MacOS, iOS and tvOS.
CSSystemInfoHelper	2.0.1	Utility library to retrieve system information.
DropDown	2.3.13	Material Design Dropdown for iOS written in Swift.
EzPopup	1.2.4	Displays popups in a simple way.
Firebase/Crashlytics	10.11.0	Reports crash statistics for mobile, desktop and tvOS, and is lightweight.
Gifu	3.3.1	High-performance animated GIF support.
IQKeyboardManagerSwift	6.5.12	A codeless drop-in universal library to prevent the keyboard sliding up and to cover the UI text field or UI text view.
KeychainSwift	4.2.1	A library for saving text and data in the Keychain with Swift.
OpenSSL-Universal	6.5.12	OpenSSL for iOS and MacOS.

StarScream	4.0.4	A conforming WebSocket RFC 6455 client library in Swift.
SwiftDNS	0.3.0	Sends DNS query directly to any DNS server in iOS and MacOS with Swift.
SwifyXMLParser	5.4.0	XML parser by Swift.

Open Source Software in SASE Client for MacOS

The following table describes the open source software that the SASE client uses for MacOS.

Name	Release	Description
Alamofire	4.7	HTTP networking library written in Swift.
AN1Decoder	1.8.0	ASN1 DER decoder for X.509 certificates.
KeychainSwift	19.0.0	Library that saves text and data in the Keychain with Swift.
OperationPlus	1.5.2	Framework based on NSOperationQueues.
SQLite.swift	0.14.1	A type-safe, Swift language layer over SQLite3.
StarScream	4.0.4	A conforming WebSocket RFC 6455 client library in Swift.
SwifyXMLParser	5.4.0	XML parser by Swift.

Open Source Software in SASE Client for Windows

The following table describes the open source software that the SASE client uses for Windows.

Name	Release	Description
Cake.Powershell	1.0.1	Executes PowerShell commands from the application.
CommandLineParser	2.8.0	Supports command line parameters for the SASE CLI.
CommonServiceLocator	2.0.2	Injects IOC.
CredentialManagement	1.0.2	Accesses Windows Credential Manager.
IPAddressRange	6.0.0	Parses a range of IP address strings.
LiteDB	5.0.11/5.0.16	NoSQL embedded database to save local application data.
log4net	2.0.12	A log framework.
ManagedNativeWifi	2.5.0	Manages wireless networks, interfaces and profiles.
Microsoft .NET		Microsoft .NET framework and its internal dependencies.
• Microsoft.Bcl.AsyncInterfaces	6.0.0	
• Microsoft.Data.Sqlite.Core	7.0.5	
• Microsoft.Extensions.Hosting	5.0.0	
• Microsoft.Extensions.Hosting.Abstractions	7.0.0	

• Microsoft.Extensions.Hosting.WindowsServices	5.0.1	
• Microsoft.Extensions.Logging.Abstractions	7.0.0	
• Microsoft.Graph.Beta	0.47.0-preview	
• Microsoft.Graph.Core	1.25.1	
• Microsoft.PowerShell.5.ReferenceAssemblies	1.1.0	
• Microsoft.Toolkit	6.1.1	
• Microsoft.Web.WebView	2.1.0.1054.31/2.1.0.1774.30	
• Microsoft.Win32.Registry	5.0.0	
• Microsoft.WindowsAPICodePack-Core	1.1.0.0	
• NETStandard.Library	2.0.3	
• Stub.System.Data.SQLite.Core.NetFramework	1.0.115.0/1.0.118.0	
• System Buffers	4.5.1	
• System.Data.SQLite.Core	1.0.115.0/1.0.118.0	

• System.Diagnostics.DiagnosticSource	4.7.1	
• System.Diagnostics.PerformanceCounter	7.0.0	
• System.IO	4.0.10	
• System.IO	4.3.0	
• System.IO.Compression	4.0.0	
• System.IO.Compression.ZipFile	4.0.0	
• System.IO.FileSystem	4.0.0	
• System.IO.FileSystem.Primitives	4.0.0	
• System.IO.Pipes.AccessControl	5.0.0	
• System.Management	7.0.1	
• System.Memory	4.5.4	
• System.Numerics.Vectors	4.5.0	
• System.Private.ServiceModel	4.7.0	

• System.Reactive	4.4.1/5.0.0	
• System.Reflection.DispatchProxy	4.5.0	
• System.Resources.ResourceManager	4.0.0	
• System.Runtime	4.3.0	
• System.Runtime	4.3.1	
• System.Runtime.CompilerServices.Unsafe	4.5.3	
• System.Runtime.CompilerServices.Unsafe	6.0.0	
• System.Runtime.Extensions	4.0.10	
• System.Runtime.Handles	4.0.0	
• System.Runtime.InteropServices.WindowsRuntime	4.3.0	
• System.Runtime.WindowsRuntime	4.7.0	
• System.Security.AccessControl	4.5.0	
• System.Security.Cryptography.Algorithms	4.3.0	

• System.Security.Cryptography.Encoding	4.3.0	
• System.Security.Cryptography.Primitives	4.3.0	
• System.Security.Cryptography.X509Certificates	4.3.2	
• System.Security.Cryptography.Xml	4.5.0	
• System.Security.Permissions	4.5.0	
• System.Security.Principal.Windows	4.5.0	
• System.Text.Encoding	4.0.10	
• System.Text.Encodings.Web	6.0.0	
• System.Text.Json	6.0.5	
• System.Threading.Tasks	4.0.0	
• System.Threading.Tasks.Extensions	4.5.4	
• System.ValueTuple	4.3.0/4.5.0	
MvvmLightLibs	5.4.1.1	Supports MVVM framework.
Newtonsoft.Json	6.0.1/13.0.3	JSON parser.

QRCode	1.3.9	QR code scanner.
RestSharp	106.11.8-alpha.0.4	Rest API client.
WpfAnimatedGif	2.0.0/2.0.2	Displays GIF files with animation.
WPFToggleSwitch	1.0.0	Toggle switch control.
ZLogger	1.7.0	Logger framework.

Additional Information

[Use the Versa SASE Client Application](#)