

# K2 connect for SAP - NLB Configuration Workaround

**BASED ON K2 BLACLPEARL RTM** 



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# **CONNECT FOR SAP: NLB**

NLB or Network Load Balance is implemented to extend the capabilities of a distributed installation to handle the increased load on a distributed network. Load balancing involves grouping 2 or more physical machines together in a cluster with similar software components installed on the two machines. Logically, all machines on the network will view the clusters or nodes as the same physical machine.

Distributed installations, are installations where each components is installed on a dedicated physical machine, and communicates with the rest of the network via the LAN. To implement the scenario described in this article, the following configuration is required.

An example distributed network is shown below, which includes a cluster node



**Note**: A number of manual steps are required. Owing to this, this document is not intended to serve as a replacement for original works discussing NLB. This document serves only to bridge the gap between the required know how and technical skill regarding NLB and the specific requirements for K2 connect for SAP.

Full support for NLB is not currently available in the current version of K2 connect for SAP, full support will be available in a later release of K2 connect for SAP. This article however, will describe how to implement a workaround that will enable a System's Administrator to implement two K2 Server Machines that are in a NLB cluster.

To implement the scenario discussed in this article, the following minimum network resources are required.

Notes on installing and configuring this network:

- The prerequisites to install this network are identical to K2 blackpearl, refer to the K2 blackpearl documentation for the installation prerequisites and requirements
- The K2 connect for SAP prerequisites can be found in the K2 connect for SAP user documentation



#### **INSTALLATION OVERVIEW**

This document will discuss installing K2 connect for SAP for the first time in a "clean" environment, with the purpose of setting up a clustered NLB K2 connect for SAP Server Environment. This approach is adopted for simplicity, however some experience with installing K2 connect for SAP is assumed. During the course of the installation instructions, some steps may be excluded where no configuration is required. If a user interface is encountered where there is no discussion, maintain the default settings and click next.

# **INSTALLATION PREREQUISITES**

To complete this installation, the K2 connect components will be installed on four machines. Excluding the SQL Server, the K2 Server Machines and the Client Machines require the following items to be installed and configured in the order described below.

## LIBRFC32 DLL

- Must be installed
- The DLL is an unmanaged assembly and must be registered

## ERP Connect

• Must be installed, no configuration is required

#### LICENSING REQUIREMENTS

When installing K2 blackpearl and K2 connect for SAP, each server instance requires a separate license. Each machine or node resident within the Cluster will require a K2 Server License and a K2 connect for SAP License.

The machine keys required to apply for licenses will be available once the installation of the server components is complete.

## **NLB CONFIGURATION**

The K2 Server Machines that are the cluster must be configured as such before attempting to install the K2 connect for SAP. It is expected that the K2 blackpearl environment has been setup, configured and is currently operational before attempting to install K2 connect for SAP alongside the K2 blackpearl servers.



## INSTALLING THE SQL COMPONENTS

**Note**: The order of installation is relevant; ensure that it is followed for best results. Not all steps contain screen captures and some steps may be omitted. This is intended as a differential set of instructions and only the relevant steps will be discussed.

The K2 connect for SAP Database components must be installed first. Follow the steps below.

- 1. Welcome Screen: Click Next
- 2. K2 connect for SAP EULA: Accept the terms and conditions, click Next
- 3. Installer Details: Click Next to continue
- 4. Installation Folder: The default destination can be persisted, unless a change is required. Click Next
- 5. K2 connect Deployment Options: Select Custom Installation, Click Next
- Feature Description: Disable all components, except the K2 connect SQL Database components. Click Next



- 7. Database connections: Enter the name of the SQL Server, database name and click Next
- 8. Ready to install: Click Next
- 9. Installation Complete: Click Finished

![](_page_5_Picture_1.jpeg)

## **K2 SERVER CLUSTERS**

To complete this portion of the installation, any number of K2 Server Machines can be part of the cluster. Each physical machine where the K2 Server is installed, the K2 connect for SAP service requires a License as well.

Note: The following must be installed before the installation proceeds:

- 1. The LIBRFC32.DLL must be installed and added to the GAC for each machine
- 2. The ERPConnect components must be installed

The installation starts with the primary node in the cluster. And the cluster must be configured before the installation begins.

## PRIMARY NODE INSTALLATION: K2 CONNECT FOR SAP SERVER

Note: The K2 connect databases must have been installed first on the SQL server before performing this step.

- 1. Start the installer
- 2. Welcome Screen: Click Next
- 3. K2 connect for SAP EULA: Accept the terms and conditions, click Next
- 4. Installer Details: Click Next to continue
- 5. Installation Folder: The default destination can be persisted, unless a change is required. Click Next
- 6. Select the option K2 connect Server, and disable the option Create new SQL Database. Click Next

![](_page_5_Picture_16.jpeg)

![](_page_6_Picture_1.jpeg)

7. Database connections: Enter the machine name of the SQL Server where the K2 connect for SAP database components were installed. Click **Next** 

🖟 K2 connect for SAP (4.8276.1.0) Setup								
■ K2[connect] <sup>™</sup>								
Please specify settings to create and connect to the K2 connect database.								
SQL Server Name: [SQL server Mach	ine name here]							
Database Name: K2Connect								
Database Creation:	K2 connect Server:							
Mindows Authentication	Windows Authentication							
C SQL Authentication	SQL Authentication							
User Name:	User Name:							
Password:	Password:							
Note : This account needs sufficient privileges to create the Database.	Note : This account needs sufficient privileges to connect to the Database.							
	< Back Next > Cancel							

- 8. System Account: The SQL Server Service Account's credentials are required
  - a. Disable the option, "Use system Account"
  - b. In the field Username, add the entire domain name path i.e. MyConnectDomain\MyUser
  - c. Enter the password
  - d. Click Next to continue
- 9. ERP Connection: Click next to continue

**Note**: If the ERP connection page does not display, the ERP software components have not been installed or have not been installed correctly and are not functioning correctly. These components are operationally critical for K2 connect for SAP and they **MUST** be installed.

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- 10. Ready to install: Click Next
- 11. Installation Complete: Click Finished

![](_page_7_Picture_1.jpeg)

## DATABASE UPGRADE AND LICENSING

Once the K2 connect Server has been installed, the node must be licensed.

- 1. Click on the Start Menu > K2 connect for SAP > K2 connect Administration Tool
- 2. The K2 connect Database Update tool displays, click Ok to proceed

	Server Name:           Database:       K2Connect         Security <ul> <li>Windows Authentication</li> <li>SQL Authentication</li> <li>User Name:</li> <li>Password:</li> </ul>	Information         The installed Database needs an Update.         Please add an administrative account with privileges to modify the existing K2 connect database.         The operation may take some time.
--	---	--

- 3. Click on Licensing
  - a. Use the machine key to obtain a license key
  - b. Enter the license key
  - c. Click **Ok** to activate the license

Desc	ription:	rence	X
SQL Conne Web Admir Langeage: CP Port:	Machine Key: License Key: License Details;	[License Key Here] Valid K2 connect License key not found. OK Cance	nistration
Server Licen	se Licensir	P	

![](_page_8_Picture_1.jpeg)

## ADDITIONAL NODES: SERVER INSTALLATION

The cluster can consist of as many K2 Servers that are required. The installation procedure is the same for each server node in the cluster. Repeat the steps above to install the second, third, fourth, etc servers that are in the cluster.

## **CONFIGURATION OVERVIEW**

Before attempting to configure the nodes in the K2 Server cluster, ensure that your infrastructure has been setup **FIRST**.

In the configuration steps, the following takes place

- 1. From the primary node in the cluster, a SAP Destination will be configured
- 2. The additional nodes in the cluster will then share this SAP destination with the primary node

## PRIMARY NODE: CONFIGURE SAP DESTINATION

The SAP Destination from which all the additional server nodes will import Service objects is configured initially on the primary node

Note: All configuration and system changes must be configured first on the primary node

- 1. Open the K2 connect Destination Explorer
- 2. Right click on Connectors > Connectors > Add
- 3. Enter a name for the Destination
- 4. For the connector path:
  - a. Click on the folder Icon
  - b. And select the connector

**Note**: If the user is unable to reach this step, the ERP connector is not installed, or not functioning correctly.

Add Proxy Asser	mbly				? ×
Look in:	Connector		1	- 0 🕽 🛤 🖪	]-
My Recent Documents	SourceCode	.ServiceObjectMc	del.ERP.Connect.		
Desktop My Documents					
My Computer					
My Network	File name:			×	Open
Places	Files of type:	proxy Assemi	bly (".dll)	*	Cancel

![](_page_9_Picture_1.jpeg)

- c. Click Open
- 5. Since this is the primary node, click NO, i.e. no imports must take place

K2 connect Destination Explorer	×
K2 connect Destination Explorer	
🍈 Open Remote Destinations	
⊂ @ Connectors — SAP	
K2 connect Server	
Do you want to import shared destinations from K2 connect Server Repository?      Yes No	
ОН	

- 6. Right click on the SAP instance, and add a system
- 7. Right click on the system and select to add a destination
  - a. Enter a name for the Destination (use an intuitive name that can be easily remembered for when the additional nodes are added)
  - b. Enable the option to Share this Destination
  - c. Enter the connection string
  - d. Click Ok
  - e. The system will prompt the user to test the connection. Click **Yes** to verify that the connection is working

K	2 connect De	stinations		×
				۲
		System:	R/3 4.6c	
		Name:	SAPLABS	
		Description:		
			Share this Destination	
		l l	(2 connect Server 🛛 🔀	
	CONNEC	TIONSTRIN	2 Do you want to test the Connection?	Super passwd
			<u>Y</u> es <u>N</u> o	
			0	K Cancel

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![](_page_10_Picture_1.jpeg)

## ADDITIONAL NODE: CONFIGURE SAP DESTINATION

The additional nodes are setup the same way as the primary node as far as the installation is concerned. As per the instructions above:

- 1. Install K2 connect for SAP
- 2. License the product, then proceed with the steps below

## CONFIGURE DESTINATION FOR AN ADDITIONAL NODE

Once the additional node has been installed and licensed, then the destination can be configured.

- 1. Open the K2 connect destination explorer
- 2. Right click on Connectors > Connectors > Add
- 3. Enter a name for the Destination
- 4. For the connector path:
  - a. Click on the folder lcon
  - b. And select the connector

**Note**: If the user is unable to reach this step, the ERP connector is not installed, or not functioning correctly.

------

Add Proxy Asser	mbly				? ×
Look in:	Connector			0 1 1 1.	
My Recent Documents Oesktop	SourceCode	s.ServiceObjectModel	.ERP.Connect.dl	r)	
My Documents					
My Computer					
My Network	File name:				Open
- Haues	Files of type:	proxy Assembly	(".dl)	*	Cancel

c. Click Open

![](_page_11_Picture_1.jpeg)

5. Since this is a secondary or an additional node imports will take place. Click Yes

![](_page_11_Picture_3.jpeg)

- 6. Click on the button **Open Remote destination** (from here the user is opening the Primary node as the remote destination)
- 7. Enter the machine name of the Primary node
- 8. Click Ok

K2 connect Des	tination Explore	r			×
K2 conne	ect Destina	ation Explor	er		
			()	Open Remote [	Destinations
🖃 🚳 Connect	ors				
📕 🔤 🛃	K2 connect Ser	ver		×	
	Server: Port: Advanced	04-host01 🗲	ок с	ancel	
					ок

![](_page_12_Picture_1.jpeg)

If the Primary node is configured correctly, the remote system will appear in the right hand pane. To configure the Remote Destination, do the following

- 1. Expand the System Node named SAP
- 2. Select and hold on the destination as shown circled in red
- 3. Drag the System to the left in the direction of the local machine by selecting the **ICON**, and carefully drop it onto the local instance of the SAP Connector

K2 connect Destination Explorer 🛛 🗶						
K2 connect Destination Explorer						
	( Close Remote Destinations					
Connectors	Connectors on 04-host01					
Local Machine di	Remote Destination					
	ок					

4. Shown below, the local machine now has a replicated instance of the default destination configured on the primary node.

K2 connect Destination Explorer							
K2 connect Destination Explorer							
	🍈 Close Remote Destinations						
Connectors	Connectors on 04-host01  SAP  R/3 4.6c  SCLABS						
	ок						

![](_page_13_Picture_1.jpeg)

- 5. To configure the destination as the default, for the local machine
  - a. Right click on the instance of the destination
  - b. Select the option Set as Default Destination
  - c. The replicated instance of the default destination has now been configured as the default destination for the local cluster node

K2 connect Destination Explorer 🛛 🛛 🗶						
K2 connect Destination Explorer						
Connectors Connectors AP AR/3 4.6c Destinations Set as Default Destination Test Connection	15					
	ок					

- 6. Click Close Remote Destination
- 7. Click Ok to close the Destination Explorer

Once the above is done, the Administrator can now configure the client machine. The client machine is the location from where the service objects will originate.

![](_page_14_Picture_1.jpeg)

#### **CLIENT MACHINE**

#### INSTALLATION PREREQUISITES

Note: The items discussed below must be considered before attempting the client installation

The same K2 connect for SAP installer is used to install a client machine, and the following items are required

- 1. LIBRFC32.DLL: The DLL must be copied to the machine and registered
- 2. ERP connect: ERP Connect must be installed before K2 connect for SAP is installed
- 3. **K2 connect for SAP**: The client machines do not require a license, however both Server and Client components are installed to facilitate system operation

# **CLIENT MACHINE INSTALLATION**

The K2 connect for SAP components are installed by following the steps outlined below:

- 1. Run the installer
- 2. Welcome Screen: Click Next
- 3. K2 connect for SAP EULA: Accept the terms and conditions, click Next
- 4. Installer Details: Click Next to continue
- 5. Installation Folder: The default destination can be persisted, unless a change is required. Click Next
- 6. K2 Connect Deployment Options: Select K2 Service Object Designer (Client Machine), Click Next

![](_page_14_Picture_17.jpeg)

![](_page_15_Picture_1.jpeg)

- 7. SQL Server: The client machine must be directed to the SQL server instance
  - a. Enter the machine name of the SQL Server
  - b. Click Next

₿ K2 connect for SAP (4.8276.1.0)	Setup
<b>K2</b> [connect] <sup>™</sup>	
Please specify settings to create and SQL Server Name: 04-sql01 Database Name: K2Connect	I connect to the K2 connect database. Browse
Database Creation:	K2 connect Server:
<ul> <li>Windows Authentication</li> </ul>	<ul> <li>Windows Authentication</li> </ul>
<ul> <li>SQL Authentication</li> </ul>	SQL Authentication
User Name:	User Name:
Password:	Password:
Note : This account needs sufficient privileges to create the Database.	Note : This account needs sufficient privileges to connect to the Database.
	< Back Next > Cancel

8. Service Account: The system account can be used for this step. Leave the default settings in place and click Next

🔀 K2 connect for S	GAP (4.8276.1.0) Setup	
K2[conn	ect]™	
Specify a user Use the Brows user names m	account to be used by the local K2 connect Server Ser e button to choose users from your network. For doma ust be in the format of DOMAIN\UserName.	vice. ains,
User Name: Password:	✓ Use System account	Prowse
	< Back Next >	Cancel

![](_page_16_Picture_1.jpeg)

# 9. ERP Connection: Click Next to continue

**Note**: If the ERP connection page does not display, the ERP software components have not been installed or have not been installed correctly and not functioning correctly. These components are operationally critical for K2 connect for SAP and they **MUST** be installed.

谩 K2 connect for SAP (4.8276.1.0) Setup	
K2[connect] <sup>™</sup>	
Available Connectors installed on this machine:	
Connect.NET by Theobald Software GmbH	
< Back Next >	Cancel

10. When the installation is complete, click Finish

![](_page_16_Picture_6.jpeg)

![](_page_17_Picture_1.jpeg)

11. Database Update: The database update screen displays. Enter the machine name of the SQL Server and then click **Ok** 

뚄 K2 connect	Database Update		X
Server Name: Database: Security I Window SQL Aut User N	04-sq101 K2Connect s Authentication hentication lame:	Information The installed Database needs an Update. Please add an administrative account with privileges to modify the existing K2 connect database. The operation may take some time.	
Passw	ord:	OK Cancel	

12. The K2 Administration Tools will launch after the screen above. Simply close the tool as there is nothing required by the user on this form

![](_page_18_Picture_1.jpeg)

## **DEPLOYING SERVICE OBJECTS**

In a standalone or a distributed environment, the service object is published directly to the K2 connect destination from the K2 Designer for Visual Studio. However, when the K2 connect Server is configured in a cluster the Service Object Designer is added manually to the Service Object repository.

#### SET THE DEFAULT SERVER

From the K2 Service Object Designer > Service Object Repository, the user must locate the primary node and set the primary node as the default server.

#### **CREATE AND COPY**

The first step is to create a service object and a discussion of how to do this is available in the K2 connect for SAP user documentation.

![](_page_18_Picture_8.jpeg)

Once the service object is ready to be published, the designer does the following.

1. Save the Service Object to the local machine Drive

Note: The Usual option to Publish Service Object is available but will not be able to publish

- 2. Select to open the containing folder, and you will locate the \*.SVD file. This is the data source for the Service Object
- 3. Copy the \*.SVD to the cluster primary node. The SVD file can be saved to any location on the primary node, so long as the location does not impose any user rights restrictions on the files once they are stored there.

![](_page_19_Picture_1.jpeg)

## SERVICE REGISTRATION AND SERVICE METHODS

Normally, the option from the K2 Designer for Visual Studio would perform the functions of publishing the service object and creating the service methods for the service object. Both these steps must now be done manually.

## HOW TO REGISTER THE SERVICE

The \*.SVD file must be copied and saved locally on the primary node of the cluster. It can be saved in any location, just as long as there are no user rights restrictions on that folder. From the K2 connect Administration Tools, do the following:

- 1. Click on Add Service Object
- 2. Browse and locate the Service object's file \*.SVD
- 3. Click Open. The \*.SVD file is now located in the Service Object Repository
- 4. Click on K2 blackpearl Settings
  - a. From the K2 blackpearl Settings dialog, Click Register Service Instance
  - b. The Administration tools will register the service object and refresh the service instance

.....

eneral	🙁 💦 Registered Components 📑 Add Server 😂 Refre
Stop service	<ul> <li>□ Service Object Repository</li> <li>⊕</li></ul>
Settings	K2 blackpearl Settings 프
K2 blackpearl Settings	K2 blackpearl Server.
Protocol	Connected to: 04-Host01:5555
	K2 connect Service
asks	Name: Service Instance not registered. Redister Service Instance.
Export Service Object	
Perform Delta Check	OK Cancel
nolication	
	Details 😥
About	Author: POINT\Administrator - Void No dependencies
Exit Application	Version: 1.0.0.0
	Created Date: 2009/03/11 11:50:49 AM

5. Click Ok to close the K2 blackpearl Settings user dialog

![](_page_20_Picture_1.jpeg)

## **K2 WORKSPACE**

The K2 connect Service Object has been registered with K2 Workspace. However, the system is referencing the primary node in the cluster and not the cluster itself. This must be reconfigured to finally enable the NLB configuration.

- 1. Open K2 Workspace and login as the system Administrator
- 2. Browse to the folder location K2 Management > SmartObjects > Services > K2 connect Service
- 3. Select the K2 connect Service Instance and click on Edit

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	Ext yew Fayorits inds type	http://04-bost01/Workspace/Navina	inn/Navination.asnx	T 🙀 🗙 Live Search	
Lot yew Favorités Lodé Belp Kit Workspace - Powered by K2 blackpeat K2 Workspace - Powered by K2 blackpeat Coged nas POINTUAlministrator POWERED BY: K2 [blackpeat POWERED BY: K2 [blackpeat POWERED BY: K2 [blackpeat Compact Summer Lottication Events   Security   User Preferences   K2 Monagement Connect Service Service Instance > K2 connect Service Services A dd C Edit C Connect Service for 04-Host01:8085 Default Connect Service for Repository on 04-Host01:8085 Services Solk Reporting Service Solk Reporting Service Solk Reporting Service Solk Reporting Service Workflow Service Solk Reporting Service Workflow Service SonatBox Lotinse Management Workflow Service	icit icit   icit i		any neurogeneon reapy		
		e Edit View Favorites Tools Help	1		
Image:	Image:	K2 Workspace - Powered by K2 blackpea	1	😭 • 🗟 - 🖷 • 🖻 B	age 🔻 🎑 T <u>o</u> ols
Reports   Management   Notification Events   Security   User Preferences                   KX Management                   PointClust.Point.local:5555 > SmartObjects > Services > Service Instance > K2 connect Service               PointClust.Point.local:5555 > SmartObjects > Services > Service Instance > K2 connect Service                 SmartObjects             Services             AD Service2               Ad              Z Edit             Connect Service for 04-HostD1:8085 Default Connect Service for Repository on 04-HostD1:8085             Services             SharePoint Service	Reports Management     Notification Events     Security     Security   S	K2WORKSPACE	Logged in as POINT\Administrator	POWERED BY: K2	[blackpearl
Q Management       PointClust.PointLocal:5555 > SmartObjects > Services > Service Instance > K2 connect Service         Image: Services       Adl Image: Description         Image: Services       Adl Image: Description         Image: Services       Adl Image: Description         Image: Services       Selected Display Name         Image: Service       Selected Display Service         Image: Service       Selected Display Service         Image: Service       Selected Display Service         Image: Service       Selected	C2 Management       PointClust.PointLocal:5555 > SmartObjects > Service Instance > K2 connect Service         Image: PointClustPointLocal:5555       Image: PointClustPointLocal:5555         Image: PointClustPointClustPointLocal:5555       Image: PointClustPoint	🛕 Reports   Management   Notification Events	Security User Preferences		
PointClustPointLocat5555 SmartObjects Services AD Service2 K2 connect Service SalesForce Service SalesForce Service SolaesForce Service Service SolaesForce Service Servic	PeintClustPointLocat:555     M dd	2 Management	PointClust.Point.local:5555 > SmartObjects > Service	es > Service Instance > K2 connect Service	
<ul> <li>Selected Display Name</li> <li>Description</li> <li>Selected Display Name</li> <li>Description</li> <li>Selected Display Name</li> <li>Connect Service for 04-Host01:8085 Default Connect Service for Repository on 04-Host01:8085</li> <li>SharePoint Service</li> <li>SharePoint Service</li> <li>SharePoint Service</li> <li>SharePoint Service</li> <li>SharePoint Service</li> <li>Stol. Reporting Service</li> <li>User Role Managerent</li> <li>Workflow Server</li> <li>License Managerent</li> <li>Workspace</li> <li>ANNOP-CBP:555</li> <li>ANNOP-CBP:555</li> </ul>	Selected Display Name Description Selected Display Name Description Connect Service for 04-Host01:8085 Default Connect Service for Repository on 04-Host01:8085 AD Service SalesForce SalesForc	PointClust.Point.local:5555	👍 Add 📝 Edit 🔒 Credentials 🗙 Delete		
Connect Service for 04-Host01.8085 Default Connect Service for Repository on 04-Host01.8085 AD Service StarePoint Service StarePoint Service StarePoint Service StarePoint Service User Role Manager Serv Workflow Server StarePoint Service Managers StarePoint Service Manager Servi	Connect Service for 04-Host01.8085 Default Connect Service for Repository on 04-Host01.8085 AD Service2 SalesForce Service Sal	E Control Control	Selected Display Name Descrip	tion	
ACTOMATIONDEV3.5555			Connect Service for 04-Host01:8085 Default	Connect Service for Repository on 04-Host01:8085	

4. Enter the name of the Server Cluster and then click Next

**Note**: Currently K2 Workspace does not support the use of special characters. If the Cluster name contains special characters, you must remove them when entering the server name. This will not affect the system identifying the Server Cluster

Edit Service Instance	×
server:	PointClust.Point.local
port:	8085
typemapping:	<object type="SourceCode.SmartObjects.Services.ServiceSDK.Objects.TypeMappings"><ty< td=""></ty<></object>
Security Provider:	SAPLABS
User Name:	
Password:	
Extra:	SAPLABS
Impersonate:	
1	Next Close

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![](_page_21_Picture_1.jpeg)

#### INSTALLING AND CONFIGURING THE SMARTOBJECT TESTER

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The SmartObject Service Tester must be installed manually and a number of proxy DLLs must be added to the GAC before the application can be used. The files are located on the client machine in the N:\prtogram files\K2 blackpearl \ BIN folder. They need to be copied manually to the corresponding folder onto the additional nodes within the cluster. And thereafter, the files need to be added to the GAC.

Note: This step must be done before installing K2 connect

Below is a list of dlls, the user must add these to the GAC on the Service Object Designer (Client) machine.

SourceCode.EnvironmentSettings.Client.dll

SourceCode.SmartObjects.Authoring.dll

SourceCode.SmartObjects.Client.dll

SourceCode.SmartObjects.Management.dll

SourceCode.SmartObjects.Services.Management.dll

🔁 C:\Program Files\K2 blackpearl\Bin					
<u>Elle E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u>	jelp				
🔇 Back 🔹 🕥 🖌 🎲 🔎 Search 🌔	Folders   🗈 🔗 🗙 🗐				
Address C:\Program Files\K2 blackpearl	🛅 C:\WINDOWS\asseml	bly			
Name A	<u>File E</u> dit <u>V</u> iew F <u>a</u> vo	rites <u>T</u> ools <u>H</u> elp	5		
configurationmanager.config	🔾 Back 🝷 🕥 - 🍂	Search Pol	ders 📅 🕅 🗙 🛄+		
S Interop.K2Studio.dll					
SourceCode.Categories.Client.dll		lassembly			
SourceCode.Dependancy.Client.dll	Assembly Name 🔺	Version Cul.	Public Key Token	Proces	
SourceCode.EnvironmentSettings.Client.	: El Accessibility	1.0.50	b03f5f7f11d50a3a		
SourceCode_EventBus.Authoring.dll	Accessibility	2.0.0.0 🧨	b03f5f7f11d50a3a	MSIL	
SourceCode.EventBus.Common.dll	State AspNetMMCExt	ibility Version=1.0.9	5000.0. Culture=peutral	MSIL	
SourceCode.EventBus.Scheduler.Author	statescomprigd Publick	eyToken=b03f5f7f1	1d50a3a		
SourceCode.EventBus.Utils.dll	: 🛃 cscompmgd	8.0.0.0	003151711050838	MSIL	
SourceCode.Framework.dll	: Custom Marshalers	1.0.50	b03f5f7f11d50a3a		
SourceCode.LicenseManagementAPI.dll	: 🕵 Custom Marshalers	2.0.0.0	b03f5f7f11d50a3a	×86	
SourceCode.Security.UserRoleManager.	s dbAutoTrack.PDFWriter	2.6.0.0	40b2134825d59165	MSIL	
SourceCode.SharePoint.WebServices.Cli	: ERPConnect20	3.0.0.21	ab88d1e080a9556c	MSIL	
SourceCode.SmartFunctions.Client.dl	:	1.0.0.0	71e9bce111e9429c	MSIL	
SourceCode.SmartObjects.Authoring.dll	StarpCode.SharpZi	0.85.1	1b03e6acf1164f73	MSIL	
SourceCode.SmartObjects.Client.dll	: IEExecRemote	1.0.50	b03f5f7f11d50a3a		
SourceCode.SmartObjects.Management	: IEE xecRemote	2.0.0.0	b03f5f7f11d50a3a	MSIL	
SourceCode.SmartObjects.Services.Man	: IEHost	1.0.50	b03f5f7f11d50a3a		
SourceCode.Workflow.Authoring.dll	: 💼 IEHost	2.0.0.0	b03f5f7f11d50a3a	MSIL	
SourceCode.Workflow.Common.dll	: 🕄 IIEHost	1.0.50	b03f5f7f11d50a3a		
SourceCode.Workflow.Runtime.Interfact	: 🕄 IIEHost	2.0.0.0	b03f5f7f11d50a3a	MSIL	
SourceCode.Workflow.SharePoint.Comm	st Interop. IWshRuntime	1.0.0.0	16a2c5aaaa1b130d	MSIL	
	: <b>É</b> ISymWrapper	1.0.50	b03f5f7f11d50a3a		
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![](_page_22_Picture_1.jpeg)

## PUBLISHING SERVICE OBJECTS ON THE ADDITIONAL NODES

When publishing the service objects on the additional nodes the identical \*.SVD file must be copied to the additional node. The procedure also uses the K2 connect Administration tool, but utilize the K2 Administration tools to simply drag the service object across. The K2 connect Service instance however cannot be refreshed remotely, and must be refreshed locally from the secondary node.

- 1. Click on Add Server
- 2. Enter the machine name of the remote node
- 3. Click ok and the remote K2 connect Server will load on the right hand pane
- 4. Select the Service object that you need to publish on the remote machine and drag it across

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	Modified Date: 2009/03/12 11:1	7:00 AM	

![](_page_23_Picture_1.jpeg)

5. The Service Object is now available from the secondary node in the cluster. This step is repeated for each node in the cluster

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6. Once the node has been copied remotely, the service on the remote node must be refreshed. This step cannot be performed remotely, and must be refreshed locally at the secondary node using the SmartObject Tester.

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As shown below, the SmartObject tester is being used to refresh the local service instance

![](_page_23_Picture_6.jpeg)

![](_page_24_Picture_1.jpeg)

### SERVICE METHODS

To create a SmartObject with corresponding service methods, this must be done manually. The simplified steps are below

- 1. Start a new K2 SmartObject Project
- 2. Run the K2 SmartObject Wizard in Advanced Mode
- 3. Clear all the default service methods for the SmartObject
- 4. Click on the Context Browser
  - a. Open Service Object Server > Connect Service... > Service Object Name > Service Method

- b. Click Add
- c. Click Close

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- 5. Auto Map the Service Methods
- 6. Click Finish to complete the process