

Documentation of SDK-Tools for asanetwork

01/03

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1 Introduction

1.1 General

The new SDK-Tools for asanetwork are intended for the development and the test of asanetwork-compatible applications. The tools support asanetwork-compatible commercial applications (Dealer Management Systems, DMS) as well as end devices (Clients, i.e. testing and checking instruments) in the asanetwork.

The new SDK-Tools offer extended capabilities, especially for the new vehicle identification and the transport of target data in asanetwork.

1.2 Overview and Application fields

ΤοοΙ	Achievment	Main application		
OrderSim	Simulation of an asanetwork-compatible commercial application (DMS).	Development of asanetwork-compatible testing and checking instruments (end devices, Clients) Reference behaviour for DMS functionality.		
	Creates and simulates order data, vehicle data, vehicle identification and target data for car exhausts.			
TestClient3	Simulation of asanetwork-compatible test and checking instruments.	Development of asanetwork-compatible commercial applications (DMS).		
	Processes order data and creates XML test results.	Reference behaviour for test and checking instruments.		
AwnDebug3	Logging and visualization of all data exchanged in asanetwork.	Troubleshooting during development and operation of asanetwork-compatible products.		
	Saving of received data for later evaluation and debugging.			
	Creating and editing of new or already existing records.			
AwnRemote	Sending of remote control commands to start an order on a distant testing instrument.	Starting of orders during the development of instruments operated by remote control.		
AwnStatus	Sending and receiving of status notifications.	Simulation of status notifications during development.		
LiveStreamSimulatior	Simulation of live transmission of brake measuring values.	Utilities for development of LiveStream- compatible receiving and controlling software.		

Table 1, application fields of the new SDK-Tools

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2 Order simulation with OrderSim

The program OrderSim is the further development of the order generator Office32, comprised until now in the asanetwork SDK. OrderSim is a Win32 console application and serves as a simulator for asanetwork orders, vehicle data, vehicle identification and target data for the exhaust emission check.

OrderSim implements the functions of a commercial application using asanetwork pre-settings.

2.1 Implemented services

Service	Priority	DiQual	DoQual	Application
Client order service	0	2	2	Sending and receiving of order data and extended vehicle data
Data storage service	5	1	0	Reception of test results parallel to the data storage service in network manager. Query of data is handled by network manager.
Identification data service	9	1	1	Sending and receiving of identification data. Query of data is handled by network manager.
Target data service for exhaust emission check	9	1	1	Sending and receiving of target data Query of data is handled by network manager.

Table 2, services used by OrderSim

2.2 Used data base

OrderSim uses fixed data to create orders. The following table shows the respective combinations of client, vehicle, extended vehicle data, identification data, target data and order positions.

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Order/	Order/ Order DID		20030401	20030402	200304	03	200304	104	200304	05
Order position										
Vehicle			VW Golf	Opel Astra	Renault M. Senic		MB A-0	Class	BMW 7	
Client			Johann Maier	Friedrich Ackermann	Ingeborg Redlich		Computer Service Auer		Xaver Rubenb	aur
10 Car exhaust	AWNTX	EM	GKAT	GKAT	UKAT		Diesel		OBD	,
20 Brake AWNTXE		3R000	Х		Х		Х		Х	
30 Toe (side slip) AWNTXS		S000	Х			Х			Х	
40 Suspension AWNTXSP000		Х			Х			Х		
50 Oil change AWNTXOM0		OM0	Х			Х)	K		
60 wheel alignment AWN		VA000		Х		Х			Х	
70 Tyre checking	AWNTX	TI000		Х		Х				
80 Wheel balancing	AWNTXV	VB000		Х		Х	>	K		
90 Tyre change AWNTXN		/L000)	K		
100 Vehicle washing AWNTXML00		/L000							Х	
0 Extended vehicle data			Х		Х)	K	Х		
Identification data AWNIXVEHID		Х	X		X	>	K	Х		
Target data car AWNDXEM000 exhausts		Х	Х)	K	Х		

Table 3, attribution of orders, vehicles and data

Note: The used client data are fictional; any similarity with real persons would be purely coincidental. The extended vehicle data originate from the TecDoc identification, as do the vehicle identification data; extra characteristics such as motor rotation speed, year of manufacture or brake data are fictional. Target data for car exhausts are also fictional and fit to the respective type of the checking, but not necessarily to the vehicle.

2.2.1 Orders and order positions

OrderSim generates 5 orders, corresponding to the respective order numbers 2003040x. Each order consists of up to 10 order positions with the position number 10 to 100. The allocation is effected in accordance with Table 3.

Order data are sent with the client order service xxxxx00000 with reference 5. Order data may be queried by other client order services with the Query function.

2.2.2 Extended vehicle records

For the orders 20030402 to 04 extended vehicle records containing additional information about the vehicle are available. These data are mainly used in Italy, in relation with the MCTC net.

Extended vehicle data are sent with the client order service xxxx00000 with reference 3. Extended vehicle data may be queried by other client order services with the Query function.

2.2.3 Vehicle identification

For the orders 20030401 and 03 to 05 vehicle identification data in the new XML-form are available. These data are sent by OrderSim once with the identification data service AWNIXVEHID. OrderSim implements no

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identification data server; a partial identification cannot be completed. Vehicle identification data can only be queried with the Query function and by the network manager.

At program start, OrderSim secures that there is only one record in the network manager at the time. For this purpose, while starting the Program eventually existing previous records are queried and deleted from the asanetwork.

2.2.4 Vehicle target data

For the orders 20030401, 02 and 04 to 05 exist vehicle target data for the exhaust emission check in the new XMLform. These data are sent by OrderSim with the vehicle target data service AWNDXEM000. OrderSim implements no vehicle target data server, a partial identification cannot be completed, and target data cannot be queried. Vehicle target data can only be queried with the Query function and by the network manager.

At Program start, OrderSim secures that there is only one record in the network manager at the time. For this purpose, while starting the Program eventually existing previous records are queried and deleted from the asanetwork.

2.3 Using OrderSim

2.3.1 Program parameters

OrderSim can be started and operated without designating parameters. The following parameters can be used to change the standard configurations:

Parameter	Meaning
-n	Order data are not deleted from the asanetwork at program end.
-s	Silent operation mode, received checking results are not displayed with notepad.
-d	Debug operation mode, all received order and result data are transferred to cust. dat and data. dat respectively.
-i IP	IP-Address of network manager in xxx.xxx.xxx format, e.g. 144.1.13.56
-l DLoc	Uses the specified DLoc instead of OFFICE1
-f BaseDir	Uses the File-Interface with the specified directory BaseDir instead of TCP/IP
-y ms	Delay in ms to simulate a slow DMS

Table 4, OrderSim parameters

2.3.2 Environment variables

Received records (Blobs) are saved in the temporary directory. OrderSim does not delete these files automatically. Therefore you should regularly delete files with the format 0000nnnn.awn from your temp dir.

The storage location can be changed by defining an environment variable. The search order is:

AWNTMP, TMP, TEMP, TMPDIR and finally TEMPDIR. The first path found is used. If none of the variables is defined, the directory of OrderSim is used.



Attention: If AWNTMP is defined globally this has effects on all asanetwork applications using the C or C++/Delphi interface. Alternatively, OrderSim can be start with a batch file defining a locally AWNTMP:

set AWNTMP=c:\MyTemp OrderSim.exe

2.3.3 Runtime behaviour

After sending the date described above OrderSim waits for updates of order or extended vehicle data or a user command:



According to the asanetwork protocol for commercial applications, detailed updates are processed and distributed again. Modifications in the order status are displayed. Data received over the data storage service is visualized with notepad.

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-	C:\Users\mrk\Documents\Projekte\Cpp\OrderSim\data\OrderSim.exe -	η
Sending Sending Sending Sending Sending Sending Sending Sending Sending Sending Sending Sending Sending Sending	order 20030403/20 operation I - Sending vehicle data operation I done order 20030403/30 operation I - Sending vehicle data operation I done order 20030403/40 operation I - Sending vehicle data operation I done order 20030403/60 operation I - Sending vehicle data operation I done order 20030403/70 operation I - Sending vehicle data operation I done order 20030403/70 operation I - Sending vehicle data operation I done order 20030403/80 operation I - Sending vehicle data operation I done order 20030403/80 operation I - Sending vehicle data operation I done order 20030404/10 operation I - Sending vehicle data operation I done order 20030404/20 operation I - Sending vehicle data operation I done order 20030404/20 operation I - Sending vehicle data operation I done order 20030404/20 operation I - Sending vehicle data operation I done order 20030404/20 operation I - Sending vehicle data operation I done order 20030404/20 operation I - Sending vehicle data operation I done order 20030404/90 operation I - Sending vehicle data operation I done order 20030404/90 operation I - Sending vehicle data operation I done order 20030405/10 operation I - Sending vehicle data operation I done order 20030405/10 operation I - Sending vehicle data operation I done order 20030405/40 operation I - Sending vehicle data operation I done order 20030405/40 operation I - Sending vehicle data operation I done order 20030405/40 operation I - Sending vehicle data operation I done order 20030405/40 operation I - Sending vehicle data operation I done	
Enter c D - Del A - Del F - Fin X - exi	ommand: ete finished orders ete active orders ish active or interrupted orders t program	
Order:	TESTC00000/I5W81,0=U,R=5,Order=20030403/40, Res='', ResCode='0' Order 20030403/40 started by mrk on 12.03.2014 11:53 sending 20030403/40 operation U	
Order:	TESTC00000/I5W81,0=U,R=5,0rder=20030403/40, Res='Prüfung mit Hinweisen abgeschlossen', ResCode='2' Order 20030403/40 started by mrk on 12.03.2014 11:53 finished 12.03.2014 11:53	
	sending 20030403/40 operation U	
Data :	AWNTXSP000/I5W81,0=I,R=5,Order number=20030403, Res='Prüfung mit Hinweisen abgeschlossen', Data=F,22 Filename: f:\awntmp\00000000.awn	
Data :	AWNTXSP000/I5W81,0=I,R=3,License plate=TÜ RZ 4532, Res='Prüfung mit Hinweisen abgeschlossen', Data=F,22 Filename: f:\awntmp\00000001.awn	
Enter c D - Del A - Del F - Fin X - exi	ommand: ete finished orders ete active orders ish active or interrupted orders t program	

Picture 2, OrderSim after order processing

In the shown example the order 20030403, position 40 was started and finished. For this order, a testing result with reference 5 and reference 3 respectively was received over the data storage service.

In the first line the respective sending service with DId and DLoc, operation identification and reference, are shown. In the second line the result and the result flag are shown, the third and eventually the fourth line show order start, operator and order end. The last line shows a confirmation about sending the modifications to the other network participants.

For the data storage service, in the third line the path to the received file is shown.

2.3.4 User commands

During the operation time of the program, the user is able to perform a series of tests to check the behaviour of his application.



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Command	Effect
D	Deletes all finished order positions and extended vehicle data. The DMS executes this operation after closing the order.
A	Deletes all currently active order positions. Normally this should be prevented by the DMS; nevertheless your application should not show erroneous function.
F	Changes the order status of all currently active or cancelled orders to "finished". Normally in the DMS this should only happen when order positions are cancelled, nevertheless your application should not show erroneous function.
Х	Ends OrderSim and deletes all order positions from the asanetwork. Specify parameter –n to prevent this.

Table 5, OrderSim user commands

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3 Testing instruments simulation with TestClient3

TestClient3 is a 32 bit windows application and is used by commercial applications as a simulation for test and checking instruments.

TestClient3 implements the functions of a testing instrument according to the asanetwork requirements.

3.1 Implemented services

Service	Priority	DiQual	DoQual	Application
Client order service	9	1	1	Sending and receiving of order data and extended vehicle data
Checking service(s)	9	1	1	Sending of checking results, login and logout optionally.
Identification data service	9	1	1	Sending of data queries and receiving of identification data, login and logout optionally.
Target data service for exhaust emission checking	9	1	1	Sending of data queries and receiving of target data, login and logout optionally.

Table 6, services implemented by TestClient3

3.2 Configuration of checking services with INI file

TestClient3 is able to support and process any checking service in any combination. They are configured in the file TestClient3.ini.

Note: Configuration data is saved in directory %APPDATA%\AxoNet Software GmbH\TestClient3!

The structure of the file looks, in extracts, like this:

```
[AWN]
DLoc=TestClnt25
Orders=AXONT00000
Results=AWNTXBR000;AWNTXSS000;AWNTXSP000;AWNTXEM000
```

The entry Results in section [AWN] defines all base services supported by TestClient3. For every one of these services an own section must follow. For the side slip service AWNTXSS000 this looks like this:

```
[AWNTXSS000]
Info=Side slip test
```

The Info entry describes the service. This information is transmitted as service description to the network manager at service login.

For services subdivided into further services, like e.g. the exhaust emission which contains more checking processes, an entry SubService with the further service has to be defined.

[AWNTXEM000] SubService=AWNTXEM010;AWNTXEM020;AWNTXEM030;AWNTXEM040;AWNTXEM050;AWNTXEM060;AWNTXEM070 Info=Emission testing

For every one of these services an own section with the Info entry must be created.

All services defined in the INI file are announced to the network manager when TestClient3 starts, according to the asanetwork requiremenets. Received order positions containing one of these services as order identification are shown in the order list. A XML testing result is transmitted via the service defined in the order and configured in the INI file. This service is logged in only during the transmission of test results.



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3.3 Used data base for test results

For every testing service contained in the INI file a homonymous XML file with the extension .awn exists in the subdirectory Result. For the toe checking AWNTXSS000 e.g. the file name is awntxss000.awn.

Each of these XML files contains a master record for the respective checking or test method. Before sending in the XML file, the TestClient3 replaces order, client and vehicle information with the data of the selected order position. The measured values it selves remain intact.

3.4 TestClient3 functionality

On start, TestClient3 announces his client order service and notifies the checking services to the network manager. An eventually existing order list is imported. The order list can be regenerated performing a query.

Newly received order positions that will show an order DId of a checking service defined in the INI file are incorporated to the order list. If there is an extended vehicle record to one of the order positions, a car symbol is shown before the order number.

Order positions from the order list can be activated, interrupted, cancelled or completed. A result flag can be set with a completed order. For every finished order position an XML test result is transmitted.

Client and vehicle details can be displayed to each order position. An identification or target data query can also be performed here. For this purpose, the respective service is logged in and after performing the query with the reference 4 logged out again.

After Program end the actual order list is saved on the hard disk in the subdirectory Save.

3.5 Application of TestClient3

Note: If you wish to execute several instances of TestClient3 on the same PC, you need to run each instance with parameter –dloc XXX. XXX is a different DLoc.

You can also create a link which assigns the correct parameter.

TestClient3 starts without specifying parameters and presents itself with its main window.

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3.5.1 The main window

Besides a menu bar and a tool bar, the main window displays a list of available orders. In the status line connection status, order details and version number are shown.

asanetwork TestC	lient - I5W81 🛛 🗕 🗖 🗙
<u>File</u> Order processing Options <u>H</u> elp	
🚯 🕨 II 🗙 🚸 ?{] 🔎 📰 🛅	
Order Pos. State Vehicle	Description
20030401 10 AA-BB	1111 Abgastest GKAT
20030401 20 AA-BB	1111 Bremsenprüfung
20030401 30 AA-BB	1111 Spurprutung
20030401 40 AA-BB 20020401 50 AA DD	1111 Radaurnangung pruren 1111 Ölwoobool Motoriil Sorto 1
-= 20030401 30 AA-BB	8765 Abassuntersuchung geregelter Kat
	8765 Achsvermessung
₩ 20030403 10 TÜ-RZ	4532 Abgastest ungeregelter Kat
🚓 20030403 20 TÜ-RZ	4532 Bremsentest
🚓 20030403 30 TÜ-RZ	4532 Spurprüfung
🚙 20030403 40 TÜ-RZ	4532 Stossdämpferprüfung
🚓 20030403 50 TÜ-RZ	4532 Ölwechsel, Motoröl Sorte 2
€ 20030403 60 TÜ-RZ	4532 Achsvermessung
← 20030404 10 S-HZ 8	376 Abgasuntersuchung Diesel
	3/6 Bremsenprutung
	999 Estruerktest
<	>
Logged in, new order, customer: Johann Maier, Volkswa	agen, Golf Version 3.1.0.102 📑

Picture 3, TestClient3 main window

Operations can be started by using the respective menu or by using the toolbar. An order can be started, interrupted, cancelled or completed. The respective status is displayed.



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Picture 4, display of the order status in TestClient3

Optionally, all order positions (i.e. also the ones that cannot be selected in TestClient3) can be displayed.



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8 2	asanetwork	<pre>c TestClient</pre>	- I5W81 🚽 🗖 🗙	
File Order processing C	ptions <u>H</u> elp			
🚯 🕨 II 🗙 🚸	?{] 🎤 📰			
Order Pos.	State	Vehicle	Description	^
20030401 10		AA-BB 1111	Abgastest GKAT	
20030401 20		AA-BB 1111	Bremsenprüfung	
20030401 30	A finished	AA-BB 1111	Spurprüfung	
20030401 40		AA-BB 1111	Radaufhängung prüfen	
20030401 50		AA-BB 1111	Ulwechsel, Motorol Sorte 1	
##20030402 10 		BB-AG 8763	Abgasuntersuchung geregeiter Kat	
		BB-AG 8765	Reifenpri ifung	
		BB-4G 8765	Reifen auswuchten	
		TÜ-BZ 4532	Abnastest ungeregelter Kat	
➡ 20030403 20		TÜ-RZ 4532	Bremsentest	
₩ 20030403 30	🖌 finished	TÜ-RZ 4532	Spurprüfung	
€ 20030403 40	-	TÜ-RZ 4532	Stossdämpferprüfung	
📣 20030403 50		TÜ-RZ 4532	Ölwechsel, Motoröl Sorte 2	
@ 20030403 60		TÜ-RZ 4532	Achsvermessung	
📣 20030403 70		TÜ-RZ 4532	Reifenprüfung	
📣 20030403 80		TÜ-RZ 4532	Reifen auswuchten	
♣ 20030404 10		S-HZ 876	Abgasuntersuchung Diesel	
♣ 20030404 20	II interrupted	S-HZ 876	Bremsenprüfung	
₩20030404 50		S-HZ 876	Ulwechsel, Motorol Sorte 3	
20030404 80		5-HZ 8/6 c uz 07c	Heiren auswuchten	
	Apotino		Abaseuptoreuchung mit ORD	
- 20030403 TU	Active	LI UD 000	Augustine such any line obd	~
<			>	
🕥 Logged in, order in proce	ssing since 12.03.201	4 12:46:38 on I	5W81 Version 3.1.0.102	

Picture 5, display of all order positions

3.5.2 Result code

When an order position is completed, the result must be selected. This result is mapped to the RESULT attribute of the XML result.



80	Result		-		×
Select result					
🖌 OK [1]		unknown	/defa	ult (0)	
🧹 with minor de	fects [2] m	easuremer	nt abo	rted [5]	
🧹 with major de	fects [3] m	easuremer	it ove	rflow [6]
🔥 not roadworth	ny [4] 🛛 🗖	neasureme	nt tim	eout [7]]

Picture 6, result code

3.5.3 The detail window

To each order position a detail window can be showed. By clicking the buttons "Query Ident data" and "Query setpoint data" you can check if the respective data are available.

Details for se	lected order posit	tion – 🗆 🗙
Customer	Vehicle	
Horst Auer Bahnhofstr. 88 75201 Königsbach-Stein Tel: +49 (7235) 87665 Leasingfahrzeug	License plate: Ident number: Manufacturer: Model:	S HZ 876 WMBZZW168WV097531 Mercedes Benz A-Klasse
connected ident data servi received ident data xml version="1.0" encod<br Created 12.04.2003 16<br <awn_vehicle kw<br="" type="1
<IDENT>
<MAKE>MERCEDES
<MODEL>A-Klasse (W
<TYPE>W168</TYPE
<ENGINE_CODE>OM
<FUEL>Diesel</FUEL
<POWER UNIT="><displacement un<br=""><kfy <="" namf="KRA2" td=""><th>ce ing=''ISO-8859-1'' stands :03:23 with AW/NX32.dll' DENT''> BENZ /168) E> I 668.941> ''>44 NIT=''ccm''>1689>0710</th></kfy><th>alone="yes"?> Version 1.4.0 Build 36> DDE> PLACEMENT></th></displacement></awn_vehicle>	ce ing=''ISO-8859-1'' stands :03:23 with AW/NX32.dll' DENT''> BENZ /168) E> I 668.941> ''>44 NIT=''ccm''>1689>0710	alone="yes"?> Version 1.4.0 Build 36> DDE> PLACEMENT>
Query vehicle identification	n Query vehicle	e data OK



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3.5.4 Oil management handling

All work orders, which include oil dispense (using Did AWNTXOM...) are handled by TestClient3 in accordance with asanetwork requirements for oil management systems.

If such an order position is started, it's automatically moved to state interrupted after 10s. If this is the first dispense, 80% of the nominal value are assigned and transmitted. This position can be started again, the actual value is increased by adding 10% of the nominal value.

6 3					as	sanetv	vork	TestCl	ient	- I5W81	-		×
<u>F</u> ile	O <u>r</u> der	proc	essing) <u>O</u> p	otions	<u>H</u> elp							
() +		Ш	×		?{]	۶		Ē					
Order 20(20(030401 030401	Pos I 10 I 20		:	State			Vehicle AA-BB AA-BB	1111 1111	Description Abgastest GKAT Bremsenprüfung			
20 20 20	030401 030401 030401	1 30 1 40 1 50			<mark>≜</mark> fini:	shed		AA-BB AA-BB AA-BB	1111 1111 1111	Spurprüfung Radaufhängung prü Ölwechsel, Motoröl	fen Sorte 1		
201 201 201 201 201	030402 030402 030403 030403	2 10 2 60 3 10 2 20						BB-AG BB-AG TÜ-RZ TÜ-RZ	8765 8765 4532	Abgasuntersuchung Achsvermessung Abgastest ungerege Bromsontest	gerege Iter Kat	lter K	at
201 201 201	030403 030403 030403	3 30 3 40 3 50		•	🗸 fini:	shed	4	TÜ-RZ TÜ-RZ TÜ-RZ	4532 4532 4532 4532	Spurprüfung Stossdämpferprüfun Olwechsel Motoröl	g Sorte 2		
20 20 20 20 20 20	030403 030404 030404 030404 030405	3 60 4 10 4 20 5 10 5 40		•	[[inte √fini:	errupte shed	d	TÜ-RZ S-HZ 8 S-HZ 8 M-XR 9	4532 76 76 99	Achsvermessung Abgasuntersuchung Bremsenprüfung Abgasuntersuchung Fahrwerktest	Diesel mit OBI	D	
20	55070.									T GIN #GIN(GS(
< 🙆 L	.ogged i	n, orc	ler inte	rrupte	d since	12.03.2	2014	12:58:48			Version	3.1.0.	> 102 _::

Picture 8, Interrupted oil dispense

You can finished an interrupted oil dispense within the 10s time frame. The result will always be set to OK.



3.6 Automatic operation

TestClient3 can be used automatic testing. In that mode orders are selected randomly and then finished. You have to call TestClient3 with parameter –auto to enable that feature.

If you like to run multiple instances, add different DLocs:

- 1. Instance: -auto –dloc Test1
- 2. Instance: -auto –dloc Test2

Simply create two shortcuts and add the parameters:

🗟 Test	Client3-Auto XX.exe Properties							
General Shorto	ut Compatibility Security Details							
Te	TestClient3-Auto XX.exe							
Target type:	Application							
Target location:	bin							
Target:	n\TestClient3\bin\TestClient3.exe -auto -dloc XX							
Start in:	M:\Subversion\TestClient3\bin							
Shortcut key:	None							
Run:	Normal window 🗸							
Comment:								
Open File Lo	ocation Change Icon Advanced							
	OK Cancel Apply							

Picture 9, Shortcut with parameter

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4 Logging with AwnDebug3

The Program AwnDebug3 is a 32 bit windows application for data logging and analysis in asanetwork.

AwnDebug3 is able to log any service classes as well as specific services.

4.1 Using AwnDebug3

AwnDebug3 starts without specifying parameters and presents itself with its main window.



Picture 10, AwnDebug3 main window

Starting here you can either import and analyze or modify saved data or select a service for logging.



4.2 Creation of a new service for logging

Click on the "New" symbol 📄 or select menu "File/New". A window for setting service parameters appears.

New service propertie	s
Type Customer order data (DMS side) Customer order data (client side) Data storage Vehicle identification Vehicle data (emission test) Status data Remote control data LiveStream (Receiver/Controller) Custom	OK - Create Cancel Details >> Debug Debug window Single step on Create and log in

Picture 11, standard service parameters

You can choose between the offered services, which are created with reasonable standard pre-settings. The debug parameters contain the display of the debug window from Awn2_32.dll, the activation of the Single Step operation modus (see there) as well as the possibility of logging in the service immediately.

If you wish to change the pre-settings, click on "Details" >>.

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Type	New service propertie	S	OK - Create
 Customer order data (Customer order data (Data storage Vehicle identification Vehicle data (emission Status data Remote control data LiveStream (Receiver Custom 	DMS side) client side) n test) r/Controller)	Debug ☐ Debu ☐ Single ✔ Create	Cancel Details << g window e step on e and log in
] Modify service and qua	ality parameters of the service		
Service			
Identifier DID	DEBUGUUUUU		
Location DLoc	AwnDebug		
License key	- internally present -		
Description	Customer order service (client)		
Qualities			
Data provision DoQual	1 - Data is generated, but not s	tored for retrie	eval 🗸
Data storage DiQual	1 - Data of other services is rec	eived but no	t stored 🔍
Priority	9		
Repetition	1- Transfer of messages accur	nulated since	the last I 🔍
Repetition point in time	12.03.2014		~
			~

Picture 12, extended service parameters

You see the pre-set values now. After checking "Modify service parameters" you can edit the service parameters. If you select the client specific service, these parameters are offered immediately for entering and you must enter the service name and the corresponding license key.



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	New service properties	×
Type Customer order data (Customer order data (Data storage Vehicle identification Vehicle data (emission Status data Remote control data LiveStream (Receiver Custom	DMS side) client side) n test) /Controller) lity parameters of the service	OK - Create Cancel Details << Debug Debug window Single step on Create and log in
Service		
Identifier DID		
Location DLoc	AwnDebug	
License key		
Description	user defined service	
Qualities		
Data provision DoQual	1 - Data is generated, but not sto	ored for retrieval 🔍 👻
Data storage DiQual	1 - Data of other services is rece	eived but not stored I 👻
Priority	9	
Repetition	1- Transfer of messages accumu	llated since the last I 🐱
Repetition point in time	12.03.2014	\checkmark
		¥

Picture 13, client specific service parameters

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4.3 The service window

After clicking "OK" the new service is created and the service window is shown. You can create any number of additional services. You can manage the order of the windows with the menu "Windows" or with the toolbar symbols 🔁 cascade, 🚍 horizontal or 🛄 vertical segmenting respectively.

File Edit S	iervice Window Help) II >I = %		AwnDebug	:			×
Did Did connected	DLoc Date/Time DDER00000 OFFICE1 R DDER00000 OFFICE1 <t< th=""><th>Date/Time 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:</th><th>Image: Service 1: DEBUG00 Operatic Service 2: Reference 4 VIN=WBWVZE 652WV 5 Order=20030401 5 Order=20030401 5 Order=20030401 5 Order=20030401 5 Order=20030402 5 Order=20030402 5 Order=20030402 5 Order=20030402 5 Order=20030403 5 Order=20030404 5 Order=20030404 5 Order=20030404 5 Order=20030404 5 Order=20030404 5 Order=20030405 5 Order=20030405 5 Order=20030405 5 Order=20030405 5 Order=20030403 3 Plate=M R R 4539 5 Order=20030403 3 Plate=M R R 4532 5 Order=20030403 3 Plate=M R R 4532 5 Order=20030405 5 Order=20030405 5 Order=20030</th><th>Constant of the second se</th><th>Send Header Id Version DId DLoc Date/Time Operation Reference Id TypeNo CustometNo Registration VIN OrderNo Record Seq. Result Data length Send Data C</th><th>S SEND 01.75 0RDER00000 0FFICE1 12.03.2014.12:58:48 U Update 5 Order number 3004.581 0003 TÜ RZ 4532 WRENZZJAZWV098765 20030403 50 D Data embedded 823</th><th></th><th></th></t<>	Date/Time 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:29 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:30 12.03.2014 12:45:	Image: Service 1: DEBUG00 Operatic Service 2: Reference 4 VIN=WBWVZE 652WV 5 Order=20030401 5 Order=20030401 5 Order=20030401 5 Order=20030401 5 Order=20030402 5 Order=20030402 5 Order=20030402 5 Order=20030402 5 Order=20030403 5 Order=20030404 5 Order=20030404 5 Order=20030404 5 Order=20030404 5 Order=20030404 5 Order=20030405 5 Order=20030405 5 Order=20030405 5 Order=20030405 5 Order=20030403 3 Plate=M R R 4539 5 Order=20030403 3 Plate=M R R 4532 5 Order=20030403 3 Plate=M R R 4532 5 Order=20030405 5 Order=20030405 5 Order=20030	Constant of the second se	Send Header Id Version DId DLoc Date/Time Operation Reference Id TypeNo CustometNo Registration VIN OrderNo Record Seq. Result Data length Send Data C	S SEND 01.75 0RDER00000 0FFICE1 12.03.2014.12:58:48 U Update 5 Order number 3004.581 0003 TÜ RZ 4532 WRENZZJAZWV098765 20030403 50 D Data embedded 823		
	Connected, service logged in		oo nems				12.03.2014 14:52:47 Ve	ersion 3.1.0.110

Picture 14, AwnDebug3 as MDI application with several service windows



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4.4 The service window in detail

After its creation the service is logged in by default. Every service can be logged in or out using the menu "Service". Alternatively this can be done using the toolbar symbols = logout service or = login service.

In the left part of the window, all received records are listed. For every record a flag (R – received, S – sent, empty when edited or modified), the DId and DLoc, the reference and the operation is displayed. They are ordered by time of reception. Using a local popup menu, single records or all of them can be \times deleted.

In the right part of the window, the details for the actually selected record are shown.

9 2		Service2: DEBU	G****	
DId DI	Loc Date/Time	Reference Ope	eration	Data ANSI
DId DId R & WNDXEM000 OF R ORDER00000 OF R ORDER00000	Loc Date/Time FFICE1 12.03.2014 12:45:29 FFICE1 12.03.2014 12:45:30 FFICE1 12.03.2014 1	Reference Ope 4 VIN=WBMVZE65ZvVV876543 5 Order=20030401 Inst 5 Order=20030401 Inst 5 Order=20030401 Inst 5 Order=20030401 Inst 5 Order=20030401 Inst 5 Order=20030401 Inst 5 Order=20030402 Inst 5 Order=20030402 Inst 5 Order=20030402 Inst 5 Order=20030402 Inst 5 Order=20030402 Inst 5 Order=20030402 Inst 5 Order=20030403 Inst 5 Order=20030403 Inst 5 Order=20030404 Inst 5 Order=20030404 Inst 5 Order=20030404 Inst 5 Order=20030404 Inst 5 Order=20030404 Inst	aration Update A ent ent ent ent ent ent ent ent ent ent	Data ANSI 0003 Redlich Ingeborg Untergasse 23 19241 Wittenburg 038852 7654 038852 7659 Kundin legt Wert auf sauberes Autol AWNTXOM012 ISW81 10003 10003 1111111111111111014031212583811111111111111120140312125848 mtk Ülwechsel, Motoridi Sorte 2 10003 3003 TÜ RZ 4532 WRENZZJAZWV098765 3004 581 Renault Megane Senic 48945 201403121245290F111111111111111114.7500003.80000098-34-45-67 Allianz Vertretung Nord **77JA **77JA 11491 D L ** **77JA Data Hex 000 30 30 30 33 20 20 20 20 20 20 20 20 20 20 20 20 20
R ORDER00000 OF R AWNTXSS000 ISV R ORDER00000 OF R ORDER00000 OF R ORDER00000 OF R ORDER00000 OF R AWNTXEM040 ISV R ORDER00000 OF R ORDER00000 OF	FFICE1 12.03.2014 12:45:30 FFICE1 12.03.2014 12:46:30 FFICE1 12.03.2014 12:46:14 W81 07.03.2014 12:46:14 W81 12.03.2014 11:16:15 W81 12.03.2014 11:46:16 W81 12.03.2014 12:46:30 FFICE1 12.03.2014 12:46:30 FFICE1 12.03.2014 12:48:30 FFICE1 12.03.2014 12:48:07 W81 07.03.2014 12:48:07 W81 07.03.2014 12:48:07 W81 07.03.2014 12:48:07 FFICE1 12.03.2014 12:48:07 FFICE1 12.03.2014 12:48:07	3 Plate=5 HZ 876 Inst. 5 Drder=20030405 Inst. 5 Order=20030405 Inst. 5 Order=20030405 Inst. 5 Drder=20030405 Inst. 3 Plate=M XR 999 Inst. 5 Order=20030401 Inst. 5 Order=20030401 Inst. 5 Order=20030401 Inst. 5 Order=20030401 Inst. 3 Plate=TÜ RZ 4532 Inst. 5 Order=20030403 Upt. 5 Order=20030403 Upt. 5 Order=20030405 Upt. 5 Order=20030403 Upt.	ent ent ent ent ent ent date date date date date date date dat	064 20 20 20 20 20 20 55 6E 74 65 72 67 61 73 73 65 080 20 32 33 20
connected, service log	gged in	60 Items		

Picture 15, the service window

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4.4.1 Data display and analysis

The selected record on the left is shown on the right side on different tabs. The first tab "Send" shows the header, reference and send data. The actual reference is marked with a bold font.

Send		
Header		
Id	S SEND	~
Version	01.75	
DId	ORDER00000	
DLoc	OFFICE1	
Date/Time	12.03.2014 12:58:48	
Operation	E Update End	~
Reference		
ld	5 Order number	~
TypeNo	3004 581	
CustomerNo	0003	
Registration	TÜ RZ 4532	
VIN	WRENZZJAZWV098765	
OrderNo	20030403	
		_
Record Seq.	50	_
Result		
Data type	D Data embedded	~
Data length	823	

Picture 16, display send data



No. 01/03

The second tab "Data" shows the raw data in ASCII format and as HEX Dump.

) ata AN 0003 19241	NSI Rei Wit	dlich tenb	urg			Ing 03	ebor 3885	g 2 76	54	(Ur)388	iterga 52 7	asse 659	23	Kur	idin l	egt	^
Wert a	uf sau	lpete	es Āu	uto!							AW	NTX	ОМО	012	_	15W	/81	
111111	11111	111	1201	403	1212	2583	8111	111	1111	111	1201	403	1212	2584	8	n n	nrk	
Ulweci BZ 453	nsel, 22 N	Mote w/RP	orol S ENIZO	orte ZIAZ	: 2 74 M	ngot	765			501	Ra	البحط	1000	კ ,	300 Maa	3 ana	IU Senio	
NZ 403	52	wn	489	20142 45	_ vv v	0307	00		0004	301	пе	nauli			Mey	arie	senic	
201403	31212	452	90F1	111	1111	111	1114	1.750	0000	3.80	0000	98-3	34-45	5-67	Alli	anz		
Vertretu	ung N	lord												×	*77J	A 1	1491	
DL																		
																		~
													•					~
)ata He	ex											•••••	-					¥
) ata He	ex 30	30	30	33	20	20	20	20	20	20	52	65	64	60	69	63	0(~
) ata He 000 016	ex 30 68	30 20	30 20	33 20	20 20	20 20	20 20	20 20	20 20	20 20	52 20	65 20	64 20	6C 20	69 20	63 20	0(h	~
) ata He 000 016 032	ex 30 68 20	30 20 20	30 20 20	33 20 20	20 20 20	20 20 20	20 20 20	20 20 20	20 20 49	20 20 6E	52 20 67	65 20 65	64 20 62	6C 20 6F	69 20 72	63 20 67	0(h	~
) ata H 000 016 032 048	ex 30 68 20 20	30 20 20 20	30 20 20 20	33 20 20 20	20 20 20 20	20 20 20 20	20 20 20 20	20 20 20 20	20 20 49 20	20 20 6E 20	52 20 67 20	65 20 65 20	64 20 62 20	6C 20 6F 20	69 20 72 20	63 20 67 20	0(h	~
) ata He 000 016 032 048 064	ex 30 68 20 20	30 20 20 20 20	30 20 20 20 20	33 20 20 20 20	20 20 20 20 20	20 20 20 20 20	20 20 20 20 55	20 20 20 20 6E	20 20 49 20 74	20 20 6E 20 65	52 20 67 20 72	65 20 65 20 67	64 20 62 20 61	6C 20 6F 20 73	69 20 72 20 73	63 20 67 20 65	0(h	~
) ata H 000 016 032 048 064 080	ex 30 68 20 20 20 20	30 20 20 20 20 32	30 20 20 20 20 33	33 20 20 20 20 20	20 20 20 20 20 20 20	20 20 20 20 20 20	20 20 20 20 55 20	20 20 20 20 6E 20	20 20 49 20 74 20	20 20 6E 20 65 20	52 20 67 20 72 20	65 20 65 20 67 20	64 20 62 20 61 20	6C 20 6F 20 73 20	69 20 72 20 73 20	63 20 67 20 65 20	0(h	~
0ata H 000 016 032 048 064 080 096	ex 30 68 20 20 20 20 20	30 20 20 20 20 32 20	30 20 20 20 33 20	33 20 20 20 20 20 20	20 20 20 20 20 20 20 31	20 20 20 20 20 20 39	20 20 20 55 20 32	20 20 20 6E 20 34	20 20 49 20 74 20 31	20 20 6E 20 65 20 20	52 20 67 20 72 20 20	65 20 65 20 67 20 20	64 20 62 20 61 20 20	6C 20 6F 20 73 20 57	69 20 72 20 73 20 69	63 20 67 20 65 20 74	0(h	~
) ata He 000 016 032 048 064 080 096 112	ex 30 68 20 20 20 20 20 74	30 20 20 20 32 20 65	30 20 20 20 33 20 6E	33 20 20 20 20 20 20 20 20	20 20 20 20 20 20 31 75	20 20 20 20 20 20 20 39 72	20 20 20 55 20 32 67	20 20 20 6E 20 34 20	20 20 49 20 74 20 31 20	20 20 6E 20 65 20 20 20	52 20 67 20 72 20 20 20	65 20 65 20 67 20 20 20	64 20 62 20 61 20 20 20	6C 20 6F 20 73 20 57 20	69 20 72 20 73 20 69 20	63 20 67 20 65 20 74 20	0(h	~
) ata He 000 016 032 048 064 080 096 112 128	ex 30 68 20 20 20 20 74 20	30 20 20 20 20 32 20 65 20	30 20 20 20 33 20 6E 20	33 20 20 20 20 20 20 20 20 20 20	20 20 20 20 20 20 31 75 20	20 20 20 20 20 20 39 72 20	20 20 20 55 20 32 67 20	20 20 20 6E 20 34 20 20	20 20 20 74 20 31 20 20	20 20 6E 20 65 20 20 20	52 20 67 20 72 20 20 20 20	65 20 65 20 67 20 20 20 20 30	64 20 62 20 61 20 20 20 33	6C 20 6F 20 73 20 57 20 38	69 20 72 20 73 20 69 20 38	63 20 67 20 65 20 74 20 35	0(h : te	~
Data He 000 016 032 048 064 080 096 112 128 144	ex 30 68 20 20 20 20 74 20 32	30 20 20 20 20 20 20 65 20 20	30 20 20 20 33 20 6E 20 37	33 20 20 20 20 20 20 20 20 20 36	20 20 20 20 20 31 75 20 35	20 20 20 20 20 39 72 20 34	20 20 20 55 20 32 67 20 20	20 20 20 20 6E 20 34 20 20 20	20 20 20 74 20 31 20 20 20	20 20 6E 20 20 20 20 20 20	52 20 67 20 20 20 20 20 20	65 20 65 20 20 20 20 20 20 20	64 20 62 20 20 20 20 33 20	6C 20 6F 20 73 20 57 20 38 20	69 20 72 20 73 20 69 20 38 20	63 20 67 20 65 20 74 20 35 30	0(h : te 2	~
Data He 000 016 032 048 064 080 096 112 128 144 160	ex 30 68 20 20 20 20 20 20 74 20 32 33	30 20 20 32 20 65 20 20 38	30 20 20 33 20 6E 20 37 38	33 20 20 20 20 20 20 20 20 20 36 35	20 20 20 20 20 31 75 20 35 32	20 20 20 20 20 39 72 20 34 20	20 20 20 55 20 32 67 20 20 20	20 20 20 6E 20 34 20 20 20 36	20 20 49 20 74 20 31 20 20 20 35	20 20 6E 20 20 20 20 20 20 39	52 20 67 20 20 20 20 20 20 20	65 20 65 20 20 20 20 20 20 20	64 20 62 20 61 20 20 20 33 20 20	6C 20 6F 20 73 20 57 20 38 20 20	69 20 72 20 73 20 69 20 38 20 20	63 20 67 20 65 20 74 20 35 30 20	0(h te 2 38	~
Data He 000 016 032 048 064 080 096 112 128 144 160 176	ex 30 68 20 20 20 74 20 32 33 20	30 20 20 20 20 20 20 65 20 20 38 20	30 20 20 20 33 20 6E 20 37 38 20	33 20 20 20 20 20 20 20 20 20 36 35 4B	20 20 20 20 20 31 75 20 35 32 75	20 20 20 20 20 20 20 20 39 72 20 34 20 6E	20 20 20 20 20 20 20 20 20 20 20 37 64	20 20 20 20 34 20 20 20 20 36 69	20 20 49 20 74 20 20 20 20 20 35 6E	20 20 6E 20 20 20 20 20 20 20 20 20	52 20 67 20 20 20 20 20 20 20 20 6C	65 20 65 20 20 20 20 20 20 20 20 65	64 20 62 20 20 20 20 20 20 20 20 20 67	6C 20 6F 20 73 20 57 20 38 20 20 74	69 20 72 20 73 20 20 38 20 20 20	63 20 67 20 65 20 74 20 35 30 20 57	0(h te 2 38	~
Data He 000 016 032 048 064 080 096 112 128 144 160 176 192	ex 30 68 20 20 20 20 20 20 20 32 33 20 65	30 20 20 20 32 20 65 20 20 38 20 72	30 20 20 20 33 20 6E 20 37 38 20 74	33 20 20 20 20 20 20 20 20 20 20 36 35 4B 20	20 20 20 20 20 31 75 20 35 32 75 61	20 20 20 20 39 72 20 34 20 6E 75	20 20 20 20 32 67 20 32 67 20 37 64 66	20 20 20 20 34 20 20 20 36 69 20	20 20 49 20 31 20 20 20 35 6E 73	20 20 6E 20 20 20 20 20 20 20 20 61	52 20 72 20 20 20 20 20 20 20 20 20 20 75	65 20 65 20 20 20 20 20 20 20 65 62	64 20 62 20 20 20 20 20 20 67 65	6C 20 6F 20 57 20 57 20 38 20 20 74 72	69 20 72 20 69 20 38 20 20 20 65	63 20 67 20 65 20 74 20 35 30 20 57 73	0(h te 2 38 e1	~
Data He 000 016 032 048 064 080 096 112 128 144 160 176 192 208	ex 30 68 20 20 20 20 20 20 74 20 32 33 20 65 20	30 20 20 32 20 32 20 65 20 38 20 72 41	30 20 20 33 20 6E 20 37 38 20 74 75	33 20 20 20 20 20 20 20 20 20 36 35 4B 20 74	20 20 20 20 31 75 20 35 32 75 61 6F	20 20 20 20 39 72 20 34 20 6E 75 21	20 20 20 20 32 67 20 37 64 66 20	20 20 20 20 34 20 20 20 20 20 20 20	20 20 49 20 31 20 20 20 20 35 6E 73 20	20 20 65 20 20 20 20 20 20 20 20 61 20	52 20 67 20 20 20 20 20 20 20 20 20 20 20 20 20	65 20 65 20 20 20 20 20 20 20 20 20 65 62 20	64 20 62 20 20 20 20 20 20 20 67 65 20	6C 20 6F 20 73 20 57 20 38 20 20 74 72 20	69 20 72 20 69 20 38 20 20 20 65 20	63 20 67 20 65 20 74 20 35 30 20 57 73 20	0(h : 2 3(e1 2	~
Data He 000 016 032 064 080 096 112 128 144 160 176 192 208 224	ex 30 68 20 20 20 20 20 20 74 20 32 33 20 65 20 20	30 20 20 32 20 65 20 20 38 20 72 41 20	30 20 20 33 20 6E 20 37 38 20 74 75 20	33 20 20 20 20 20 20 20 20 36 35 4B 20 74 20	20 20 20 20 20 31 75 20 35 32 75 61 6F 20	20 20 20 20 20 20 20 20 20 20 20 39 72 20 34 20 6E 75 21 20	20 20 20 32 67 20 20 37 64 66 20 20	20 20 20 20 20 20 20 20 20 20 20 20 20	20 20 49 20 31 20 20 20 35 6E 73 20 20	20 20 65 20 20 20 20 20 20 20 20 61 20 20	52 20 67 20 20 20 20 20 20 20 20 20 20 20 20 20	65 20 65 20 20 20 20 20 20 20 20 65 62 20 20	64 20 62 20 20 20 20 20 20 20 67 65 20 20	6C 20 6F 20 57 20 38 20 20 74 72 20 20	69 20 72 20 69 20 38 20 20 20 65 20 20	63 20 67 20 74 20 35 30 20 57 73 20 20	0(h : 2 38 e1 2	•
Data He 000 016 032 048 064 080 096 112 128 144 160 176 192 208 224 224 240	ex 30 68 20 20 20 20 20 20 20 32 33 20 65 20 20 20 20	30 20 20 32 20 32 20 32 20 20 38 20 72 41 20 20	30 20 20 20 33 20 6E 20 37 38 20 74 75 20 20	33 20 20 20 20 20 20 20 36 35 4B 20 74 20 20	20 20 20 20 20 31 75 20 35 32 75 61 6F 20 20	20 20 20 20 20 20 20 20 20 20 20 20 20 2	20 20 20 55 20 32 67 20 20 20 20 20 20 20	20 20 20 20 20 34 20 20 20 20 20 20 20 20	20 20 49 20 74 20 20 20 20 20 20 20 20	20 20 6E 20 20 20 20 20 20 20 20 20 20 20 20 20	52 20 67 20 20 20 20 20 20 20 20 20 20 20 20 20	65 20 65 20 20 20 20 20 20 20 20 20 20 20 20 20	64 20 62 20 20 20 20 20 20 67 65 20 20 20 20	6C 20 6F 20 73 20 57 20 20 20 20 20 20 20	69 20 72 20 73 20 20 20 20 20 20 20 20 20 20	63 20 67 20 74 20 35 30 20 57 73 20 20 20	0(h : 2 38 e1 2	~

Picture 17, display raw data

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For extended vehicle records, the tab "Vehicle" shows the vehicle details.

Vehicle			
Registration	M XR 999	Registration date	18/01/2002 09:30:36
VIN	WBMWZE65ZWV876	Last registration	14/04/2003 17:27:41
TypeNo/KBA23	0005 724	Produced since	2001
Manufacturer	BMW	Produced until	
Model	7	Weight kg	1998
Mileage	79659	Braking system	
Last visit	14/03/2001 14:56:00	Service brake	H Hydraulic
		Secondary brake	H Hydraulic
Volume ccm3	16179	Parking brake	M Mechanic
Power kW	245	Parking brake contr.	H Hand (lever)
Fuel	U Unleaded	Parking brake axle	F Front axle
Catalytic	T True	4×4	T True
Turbo	T True	Noise test RPM	
max. RPM		Noise level dB	
Engine code	N 62 B 44	Tyres	205R12
lgn. system			
Gear code			
Symptom			
New fields for He	ader.Version >= 01.75		
Veh. category	M1	Trailing load	
Emmission key		Weight unit	unknown
Veh. type key		Exhaust tracts	
TecDoc ID	16179	Use	unknown
Country ID	D	Motor ID	
Verbally type		Production	2002
Diesel EDC	T True	Number of axles	2
Max. weight		Gear type	A Automatic
Tec. weight			

Picture 18, display extended vehicle data



Accordingly, for orders, order details are shown.

	Customer			Order		
	CustomerNo	0003		Order DId	AWNTXOM012	
	Last name	Redlich		Nom. workpl.		
	First name	Ingeborg		Act. workpl.	15W81	
	Address	Untergasse 23		Nominal start	11.11.1111 11:11:11	
	Postal code	19241		Actual start	12.03.2014 12:58:38	
	City	Wittenburg		Nominal end	11.11.1111 11:11:11	
	Phone	038852 7654		Actual end	12.03.2014 12:58:48	
	Fax	038852 7659		Nom. operator		
	Comment	Kundin legt Wert auf s		Act. operator	mrk	
	Makiala			Comment	Ölwechsel, Motoröl So	
	Customet	0002		State	l Interrupted 🗸 🗸	
		2002		Eutended		2
	DB Record	3003 TÜ DZ 4533			O	
	Registration	10 RZ 4032		Hesult code		
	VIN	WRENZZJAZWVU98/		Permission	FFalse V	
	TypeNo/KBA	3004 581 Demosile		Next inspect.	4.75	
	Manufacturer	Henault		Nom. amount	4,/5	
	Model	Megane Senic		Act. amount	3,8	
	Mileage	48945		Item number	98-34-45-67	
	Last visit	12.03.2014 12:45:29				
	New fields for He	ader.Version >= 01.75	-	(ĥ
	Company	Allianz Vertretung Norc		TecDoc ID key	11491	
	Customer Title			Country ID	D	
	Mobile phone		Item amount unit		L	
	Customer state			General user ID		
	Veh. category	~		Expertise number		
	Emmisson key	**77		Expert name		
	Veh. type key	JA				
1			_			-

Picture 19, display order data

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If the received data contains a file, it is displayed on the tab "File" together with the file name.

Blob	
File Name:	_
C:\Users\mrk\AppData\Local\Temp\00000061.awn	
xml version="1.0" encoding="ISO-8859-1" standalone="no" ? xml-stylesheet type="text/xsl" href="gas.xsl"? RESULTS SYSTEM "awnres.dtd" Created 25.05.1999 11:17:37 with AWNX32D.dll Version 0.7.0 Build 15	
<pre><results> <resultsheader> <country> <regulation>GERMAN</regulation> <regulation>GERMAN</regulation> <country> <country> <customer> </customer> </country></country></country></resultsheader></results></pre> <p< td=""><td></td></p<>	
vehicle data, both fixed and changing like odometer <odometer>54321</odometer> <total_weight>1000</total_weight> <total_weight_max>4000</total_weight_max> 	
 <result method="GAS_CL_CATALYST" object="EMISSION"> <title>Abgasuntersuchung</title> <header> <equipment type="CONTROL"></equipment></header></result>	

Picture 20, display file data (blobs)

4.4.2 Query of data

Using the service menu or the tool button ? a query of data can be started any time. A dialog window is shown, where you must select reference and enter reference data.



	Query		×
Reference			Querv
5 Order number		~	
Order number O last () all O user defined			Cancel
Record sequence Iast all user defined	e (position)		

Picture 21, query of all orders

Reference			Query
5 Order number		~	
Order number			Cancel
🔘 last			
🔾 all			
user defined	20030401		
Record sequenc	e (position)		
🔵 last			
🔵 all 🌒 user defined	L d		
 all user defined 	10		

Picture 22, query of a specific order position



Reference		Query
3 Vehicle license Vehicle license pl) last) all	plate (registration number) •	Cancel
O user defined	20030401	
1 month		~

Picture 23, query of data with reference license plate, max. 1 month old

4.4.3 Sending of data

The particular selected record can be sent using the service menu or the tool button $\xrightarrow{\square}$ Send. The sent entry is sent with the DId and DLoc of the service logged in and is added as a new record with flag S.

4.4.4 Creating / modifying of data

A new record can be created using the editing menu "New" or the tool button \square Create. The newly created or another selected record can be changed to processing mode with the editing menu or the tool button \square edit. All changes in the respective tab are applied after executing \checkmark Save. Alternatively, the modified record can be stored with \ddagger as a new record. Modifications can be cancelled by clicking the button \leftthreetimes .

If you made changes on a tab and now are trying to pass to another tab, you are asked to save, add or delete the data.

4.5 Single Step operation mode

Normally, the service logged in automatically sends a "ready for receive" after receiving a record. By activating the Single Step operation mode on the service menu or by using the tool button II no automatic "ready for receive" is sent. By clicking on II the next record can be received. A click on ends the Single Step operation mode, while a click on Stop notifies the service online, i.e. outstanding data remain without transmission.

4.6 Storage of received or created data

As soon as records exist, using the file menu or the tool button 🗟 all shown data can be saved in a new file.

4.7 Import of saved data

By using the file menu or the tool button 🗁 Open, saved records can be loaded for analysis. In this operation mode no service is logged in and no data can be sent. Also, file attachments (blobs) are not automatically deleted if the record is deleted or the window is closed.



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4.8 Typical use cases for AwnDebug3

4.8.1 Logging of data exchange between DMS and testing instrument (orders)

Please create a client order service (DMS page). The client order service logs all data exchanged between the DMS and the testing instrument(s) and/or applications.

The trace can be saved in a file and sent e.g. by email to be examined by Support. Support can import the file in AwnDebug3 and analyze it comfortably.

Limitations:

Queries of checking instruments are by default not logged, because DiQual/DoQual is set on 1.

If changed to 2, incoming queries are logged, but this can maybe influence the behaviour of the application because a query is not transmitted afterwards.

Answers to the query from DMS cannot be logged, because they are sent directly to the query-maker. If necessary, this can be tested by starting a query from AwnDebug3.

4.8.2 Logging of data storage (e.g. results)

Please create a data storage service. The data storage service logs all data traffic which is not sent only to DMS or other receivers because of priorities. Typically, a trace of sent testing results can occur with this.

The statements from the chapter above are also valid for the evaluation and the limitations. While saving, the trace is saved in a file and every blob in another file with the same base name. For later evaluation all files must be available.

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5 Remote start of orders with AnwRemote

AwnRemote enables the sending of start commands to start an order on another instruments. Internally, the service AWNAXRCORD is used for this purpose.

Tip: AwnDebug3 permits the logging of this data.

5.1 Using AwnRemote

After starting AwnRemote the order number and position must be entered. Then the receiver DLoc is set, because here direct addressing is used.

Start order by RC-Service	×
Start remote order	
Order	Position
20110202	10
Address (DLoc) AwnDebug	9
Start order	

Picture 24, AwnRemote

AwnDebug3 can show the commands as XML data:



Picture 25, AwnRemote data



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6 Display status information with AwnStatus

AwnStatus allows sending and receiving of status information. Status information can be transmitted by checking instruments to notify the status of enduring operations to commercial software.

AwnStatus can be used both as receiver and as sender.

6.1 Using AwnStatus as status receiver

To use AwnStatus as a receiver, the checkbox below must be activated.

Sender Intervention required Message Source	Send status
Source	
,	
Progress	
Reference values from order (yellow = required) Order number Position	
License plate	
VIN	
Receiver	

Picture 26, AwnStatus

In the tray bar the icon is now visible with a green check mark.



Picture 27, AwnStatus receiver active

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Received notifications are displayed as balloon messages:



Picture 28, received status notification

6.2 AwnStatus as status sender

In order to send a status notification, at least the order number and the license number must be entered:

asanetwork Status Sender,	/Receiver	
Sender		
✓ Intervention required		Send status
Message		
No response from controller		
Source		
Diag2000		
Progress		
Reference values from order Order number	(yellow = required) Position	
20030402	10	
License plate		
ES XY 1234		
VIN		
Receiver		

Picture 29, sending of status notifications

Same as above, with AwnDebug3 the data content can be traced:



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-Dal	ita ANSI	
<s fro</s 	itatus> <messageinterventionrequired="true" source="Diag2000">No response m controller</messageinterventionrequired="true">	*

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Picture 30, AwnStatus data

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7 Transmission of real time values with LiveStreamSimulator

LiveStreamSimulator implements data transmission for a brake bench which after request sends continous measuring values.

The simulated measuring values rise from 0 to approximately 1500N and then stay fluctuating around this value.

7.1 Using LiveStreamSimulator

The simulator runs without further configuration, same as a brake bench. For simulation purposes, you can select the brake bench type and between single tire measuring left/right or axis measuring before the start of transmission. Also, at runtime errors can be set and transmitted.

asanetwork Live Strea	m Simulator 2.1.0.14
asanetwork	
Connected: 169.254.80.8	30
My DLoc: LI5W81	
Brake test stand	
Roller type test stand, conform	ning to regulation 2011
 Roller type test stand, conform 	ning to regulation 2003
O Plate type test stand	
O 4 Wheel plate type test stand	
Maximum supported resolution	n
10 💌	
Mode	
O Single wheel left	
O Single wheel right	
Obten wheels	
Live Stream Start Parameters	
Resolution:	
Target:	
Simulated Measurement Value	s
Simulate error	
Actual Brakeforce:	
State:	
Simulate wheel weights	
Simulate axle weight	





The simulator displays the receiver of the measuring values and the required resolution. Permitted values for the resolution are between 1 – max. resolution. Any request for a higher resolution will create an error.

asanetwo	ork Live Stream Simulator 2.1.0.14	×
asanetwork		_
Connected:	169.254.80.80	
My DLoc:	LI5W81	
Brake test stand		_
Roller type tes	st stand, conforming to regulation 2011	
Roller type tes	st stand, conforming to regulation 2003	
Plate type tes	t stand	
4 Wheel plate	type test stand	
Maximum suppo	rted resolution	_
10 🛋		
Mode		_
Single wheel k	A	
 Single wheel ri 	iaht	
Both wheels	2	
Live Stream Sta	rt Parameters	_
Resolution:	5	
Target:	LiveDebug	
Simulated Meas	urement Values	_
Simulate error		
Actual Brakeforce	: 200 / 215	
State:	Transmission started	
Simulate whee	l weights	
Simulate axle v	veight	

Picture 32, LiveStreamSimulator running

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7.2 Using LiveStream controller in AwnDebug3

AwnDebug3 includes a LiveStream controller and display. Measuring values are shown graphically:

2				AwnDebug - [Servio	e1: LIVESTREAM] _ 🗆 🗙
🥵 File Edit	Service	Window Help			_ <i>B</i> ×
D 🗳 🖥	-	🗙 ?{] 🖳 🕨 🚺) = 😤 E	2 🗂 👛 🔹 🔺	✓ + X
DId	DLoc	Date/Time	Reference	Operation	Live Stream Controller
R LIVESTREAM	LI5W81	12.03.2014 15:02:51	L LiveStream	Update 🔺	Selected Sender LI5W81 V 😋 Brakeforce 0 0
B LIVESTREAM	LI5W81	12.03.2014 15:02:51	L LiveStream	Update	Slin 0 0
R LIVESTREAM	LI5W81	12.03.2014 15:02:51	L LiveStream	Update	Careed 0.00
R LIVESTREAM	LI5W81	12.03.2014 15:02:51	L LiveStream	Update	Start Stop Speed 0.00 0.00
R LIVESTREAM	LI5W81	12.03.2014 15:02:51	L LiveStream	Update	Wheel Weight
BLIVESTREAM	LISW81	12.03.2014 15:02:51	L Livestream	Update	Receiver (Target) LiveDebug 💙 Pressure Pm/Pz
R LIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Update	Resolution 10 🚔 Pedalforce 146
R LIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Update	Avle Weight
R LIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Update	
BLIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Undate	Error Axie/Number 0 247
R LIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Update	Brake tester Roller, 2011 Mean value
R LIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:52	L LiveStream	Update	
BLIVESTREAM	LISW81	12.03.2014 15:02:53	L LiveStream	Undate	Live Stream
R LIVESTREAM	LI5W81	12.03.2014 15:02:53	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:53	L LiveStream	Update	2,000
R LIVESTREAM	LI5W81	12.03.2014 15:02:53	L LiveStream	Update	2.400
BLIVESTREAM	LISW81	12.03.2014 15:02:53	L Livestream	Update	2 200
R LIVESTREAM	LI5W81	12.03.2014 15:02:53	L LiveStream	Update	2.200
R LIVESTREAM	LI5W81	12.03.2014 15:02:53	L LiveStream	Update	2.000
R LIVESTREAM	LI5W81	12.03.2014 15:02:54	L LiveStream	Update	
BLIVESTREAM	LI5W81	12.03.2014 15:02:54	L Livestream	Update	1.800
R LIVESTREAM	LI5W81	12.03.2014 15:02:54	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:54	L LiveStream	Update	1.600 - 30
R LIVESTREAM	LI5W81	12.03.2014 15:02:54	L LiveStream	Update	4 400
B LIVESTREAM	LI5W81	12.03.2014 15:02:54	L LiveStream	Update	1.400
R LIVESTREAM	LI5W81	12.03.2014 15:02:54	L LiveStream	Update	1200
R LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update	1.000 - 20
R LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update	800
R LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update	600
B LIVESTREAM	LI5W81	12.03.2014 15:02:55	L LiveStream	Update L	
R LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	+···
R LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	
B LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	
R LIVESTREAM	LI5w81	12.03.2014 15:02:56	L LiveStream	Update	0 50 100 150 200
R LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	– Left brake – Right brake – Left slip
H LIVESTREAM	LI5W81	12.03.2014 15:02:56	L LiveStream	Update	- Right slip - Left Brake Rear - Right Brake Rear
B LIVESTREAM	LI5W81	12.03.2014 15:02:57	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:57	L LiveStream	Update	
R LIVESTREAM	LI5W81	12.03.2014 15:02:57	L LiveStream	Update 💙	Send Data Live Stream
connected, service	ce logged in			247 Items	
					12.03.2014 15:03:16 Version 3.1.0.110

Picture 33, LiveStream support in AwnDebug3

The control requires that you first select the used brake bench or simulator (sender). The combobox shows only the currently active senders, i.e. logged in to the network manager. By clicking on the refresh button on the right, the list can be updated any time.



After choosing a sender, the transmission can be activated with Start and finished with Stop. Optionally, the transmission can be limited to LiveDebug as the only receiver and the resolution can be adapted.

Live Stream Controller	Live Data			
Selected Sender 📙 😽 🗸 😋	Brakeforce	0	0	
	Slip	0	0	
Start Stop	Speed	0.00	0.00	
	Wheel Weight			
Receiver (Target) LiveDebug 🗸	Pressure Pm/Pz			
Resolution 10 🖨	Pedalforce	146		
	Axle Weight			
Error	Axle/Number	0	247	
Brake tester Roller, 2011	Mean value			

Picture 34, Live Stream control in detail

The mean value is only used for plate brake benches:





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8 Appendix

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8.2 History

8.2.1 Version 3.1 of 3/10/2014

Updated and enhanced for version 3.1.

8.2.2 Version 3.0 of 2/2/2011

Extended version with AwnRemote, AwnStatus and LiveStreamSimulator.

8.2.3 Version 1.0 of 7/2/2003

First official version for the new SDK Tools 1.0