Columbus Inventory

User Manual

Module version 7.6



Issue: 12.18

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Document titel	Columbus Inventory - User Manual
Product version	7.6
Production and printing	Brainware Consulting & Development AG Sumpfstrasse 15 CH-6300 Zug
Release date	12.12.2018

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Content

0	Gen	eral	7
	0.1	Typographical conventions	7
	0.2	Help	
	0.3	Licensing	9
1	Proc	luct Description	10
	1.1	Intro	
		1.1.1 Why inventorization	10
		1.1.2 Asset Management	
	1.2	Inventorization methods	
		1.2.1 Basic inventory	
		1.2.2 Inventory Collection Agent	
		1.2.3 InventoryScanner	
		1.2.4 NetworkScanner	
	1.3	Function	
		1.3.1 System overview	
		1.3.2 Data now overview	14
2	Insta	allation	15
	2.1	Basic Installation	15
	2.2	Module installation	16
		2.2.1 NetworkScanner	16
3	Cent	tralized inventorization	18
	3.1	Function of NetworkScanner	
		3.1.1 Network browser	
		3.1.2 NetworkScanner	
	3.2	Configure NetworkScanner	
		3.2.1 Define Running Time	20
		3.2.2 Define the IP range	21
		3.2.3 Import Settings	
		3.2.4 Define Scan Type	23
	3.3	Reporting	
		3.3.1 Export Data	25
	3.4	Faults and Problems	
		3.4.1 Possible error sources	
4	Acti	ve inventorization	28
	4.1	Application principle	28
		4.1.1 Introduction	28
		4.1.2 Basic inventory	
		4.1.3 Software scan	29

	4.1.5 Columbus assets	
4.2	Configuration	
	4.2.1 What must be observed	
	4.2.2 Activate and assign Inventory Collection Agent	32
	4.2.3 Overview of the inventorization methods	
	4.2.4 Configure the importer	34
	4.2.5 Configure InventoryScanner	
4.3	Using	40
	4.3.1 Distributing InventoryScanner	40
4.4	Install the InventoryAgent	40
4.5	Install Standalone InventoryScanner	41
	-	

Anno	ex	43
5.1	Manage inventory data in the Console	43
	5.1.2 Re-Deliver /Delete & Re-Deliver Inventory	43
	5.1.3 Push inventory data	45
5.2	Additional inventory values for Spider	46
5.3	Installer for the Standalone InventoryScanner	47 47
	5.3.2 Installation on target devices 5.3.3 De-installation	48
	Ann 5.1 5.2 5.3	Annex 5.1 Manage inventory data in the Console

General

Thank you very much for choosing brainwaregroup and Columbus. With this manual, we intend to provide you with a detailed insight into Columbus Inventory. The manual confines itself to the features of Inventory and assumes basic knowledge of Columbus.

Before you start concerning yourself with Inventory, we recommend to read the manuals Columbus **Installation** and Basic which familiarize you with the initial installation or migration, the basic functions, the configuration of Columbus as well as the structure and operation of the Management Console.

0.1 Typographical conventions

This manual uses various formats to highlight certain terms and actions. Specific notes and tips are shown with a different background color, according to their importance.

Format	Description
Bold font	Elements in the software or in the operating system, such as menu items, buttons or elements of a selection list
Italic font	Emphases (important details) and links to other chapters or documents
Triangle symbol "≻"	Instruction step
Angle bracket ">"	Command menu sequences, e.g. File > Open
System font	Directories, code and script samples
CAPITAL LETTERS	Key names, e.g. SHIFT, CTRL, or ALT
KEY+KEY	Key combinations, i.e. the user has to hold one key and press another simultaneously, e.g. CTRL+P or ALT+F4.

Note Used for notes or tips which facilitate the work or for additional information which enhances understanding for the product.

Important	Information which should be observed by the user, because otherwise problems or additional
	work may be caused in operation.

Attention Information which should be observed by the user in order to prevent malfunctions of the system (crashes, data loss, system failure).

0.2 Help

Please visit our **Website http://www.brainwaregroup.com** for additional information and support. Here you can find all documents, a **KnowledgeBase https://kb.brainwaregroup.com/** as well as a support form if you have questions for our specialists.

Support

The support page features a link to the **KnowledgeBase https://kb.brainwaregroup.com/**, the support form and information about our customer service.

- Open www.brainwaregroup.com http://www.brainwaregroup.com in your browser and click on Support and KnowledgeBase on the right side.
- Start your search in the KnowledgeBase where you can find a list of the most common support cases

If nothing matches your search criteria, you may use the support form for advanced information. Please provide a detailed description of your problem so that our specialists can help you as quick as possible.

- Click on Support Form.
- > Please fill in at least the fields marked with an asterisk (*) and click on Send Question

I You will receive a confirmation that your question has been received in the system.

The support page contains the telephone numbers necessary for telephone contacts.

Documentation

A separate download area is available on our web site for the currently available documentation. This area contains all manuals in PDF and CHM format in German and English language. At present, some of the technical manuals are only available in English.

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- > Click on Login, enter your User name and Password and then click on Register.
- Please select Documentation as download type, then select the desired product and click on Search

I An overview of all available documents will be displayed.

 Click on the desired format and language to download the PDF/CHM file in the desired form.

You will find the Acrobat Reader on our support page or directly under www.adobe.com.

Note

During the installation the documents are copied by default to the directory named [C:\Program Files]\Columbus. In order to display the Console help in German you will have to rename the file CMC_de.chm in the \Console directory to CMC.chm.

Training information

brainwaregroup is taking all efforts to ensure that our products and solutions will be used and operated in an appropriate, qualified and proper way. Therefore, we are offering various training courses. You can find all information about training types and dates under the **Training** http://www.brainwaregroup.com/de-ch/kalender/train-

ing.html?utm_source=bwg.KC&utm_medium=referral menu point

0.3 Licensing

Relevant for licensing is the number of managed assets based on the valid price list at the time of purchasing the license.

Managed assets are computer systems, e.g. laptops, desktops, servers, virtual servers, thin clients, mobile devices, tablets, every kind of asset for which software can be managed or for which another active management is technically available.

Such an active management can be e.g. the installation of the operating system, the inventorization or the distribution of software (no definitive list). The service desired by the customer determines the suites or modules to be licensed.

A license is basically bound to one computer, regardless whether the license is used only once or continuously.

Apart from computers, Columbus is also able to collect data from additional network devices (routers, switches, printers, etc.) which are administered as so-called *Not Managed Devices*. These devices require no Columbus license as long as they have the status *Not Managed*.

Columbus has an active license check for all Columbus modules. License limit violations are signaled both on the Console as well as in the log file.

Summary

The brainwaregroup licensing rules comprise the following:

- Each <ASS> operated by Columbus requires a license.
- The transfer of a license to another computer is limited to replacement purchases.

In case of a license violation

- you will be notified at the start or during your work with the Console,
- entries are generated in the log files.

ImportantIf the number of managed assets increases, the customer shall bind himself/herself to obtain a
new license for the additional ones within 30 days. The Software can restrict or stop the opera-
tion after an under-licensing period of 30 days.

A license comprises the temporally unlimited, non-exclusive usage right for the current version of the Software including all hot fixes within one year from the invoice date.

CHAPTER 1

Product Description

In this chapter

Intro	10
Inventorization methods	11
Function	12

This chapter gives a short introduction to the material and describes the basic functions of Columbus Inventory.

1.1 Intro

Columbus Inventory is used for the inventorization of systems managed by Columbus. Inventory comprises several components for various inventorization needs.

The data collected by Columbus Inventory can be further used within the different functions of Columbus (e.g. search, select or report). The combination with Spider <Ass>, Licence and Contract offers a flexible and individual software asset management.

You can use Columbus Inventory for a unique rollout planning as well as for daily operations.

1.1.1 Why inventorization

Can you provide on-the-spot information about

- which IT systems are maintained in your network?
- how the systems are configured?
- which software is installed and how frequently it is used?

Only very few companies are able to answer these or similar questions. To receive meaningful answers to such questions, Columbus Inventory has been developed. It is thus the right tool in the area Inventorization for your company and, in combination with Spider, helps you to minimize license fees, error analysis time and downtimes.

1.1.2 Asset Management

The attention of the IT managers increasingly focuses on the standardization, improvement and cost reduction in the company. Asset Management is one means with which to achieve these goals.

Columbus Inventory supplies the technical basic data for a further Asset Management which is covered in the brainwaregroup product family of Spider Asset. This is about the evaluation of IT investment goods, hardware and software, licenses, agreements or service level agreement (SLAs) as well as the question: Who is using what and how intensely?

In cooperation with Spider Asset, Columbus Inventory allows for the acquisition and management of technical, financial and contractual aspects of the IT infrastructure and thus covers important areas in a Lifecycle Management System.

1.2 Inventorization methods

The inventorization requirements vary a lot depending on the current tasking. Therefore, Columbus offers various methods in order to collect inventorization data.

- Basic inventory By Management Client, PXE and manual inputs
- Management Client with licensed inventory Complete inventory data collection, incl. software, hardware and metering (software usage).
- InventoryScanner for detailed inventorization of hardware and software.
- Inventory Agent Complete inventory data collection, incl. software, hardware and metering (software usage).

NetworkScanner – for a centralized inventorization of all network devices, such as computers, routers, switches, printers, etc.

- Remote Inventory Active inventorization on devices that are on the network and online (based on WMI).
- Manual detection

1.2.1 Basic inventory

The Management Client automatically collects basic inventory data of the computer required for an efficient software distribution. Furthermore, inventory values can also be read out from software packages using the Columbus script language via the WMI interface and transferred to the database.

During a PXE Request, hardware data are collected and stored for further processing in Columbus.

1.2.2 Inventory Collection Agent

The Inventory Collection Agent is an independently runnable service that collects inventory data periodically and without user interaction. The service is automatically updated from a central point and, contrary to InventoryScanner, can also record the SW use.

1.2.3 InventoryScanner

The function of InventoryScanner is available in different forms. Columbus offers the corresponding component for each application and data requirements.

In case of continuous operation, an installed service is recommended; in case of a single inventory, an application is recommended which is executed in the user context and, e.g. is started with a login script.

All components with inventorization function can be used for all platforms supported by Columbus (Client & Server, Thin Clients, Terminalserver, Citrix Server etc.).

1.2.4 NetworkScanner

The NetworkScanner is a module integrated in the Indexing Agent, which looks for active devices in pre-defined IP areas and adds them to the inventory using techniques like Ping, RARP, NetBIOS, SNMP, DNS reverse lookup, etc.

This technology is especially applicable for the *exploration* of unknown networks and inventorization of printers, switches, etc. which are not able to run a Management Client.

If the relevant user data have been stored, the NetworkScanner also collects additional data from WMI.

1.3 Function

1.3.1 System overview

The following explains the system components and their basic functions which are required for a Columbus system.



Master Server

The Master Server, which also contains the Columbus Database, is the core of a Columbus System which is used by all components to communicate with each other. All required information is collected in the Columbus Database and is therefore also available for a comprehensive reporting.

In principle, the Columbus System is based on the fact that, on the one hand, the current status of a device is saved in the database and, on the other, that a new target status is defined by allocation of jobs (e.g. software, operation system) which is then implemented by cooperation of all involved components.

The database basis is Microsoft SQL Server. From the point of view of function, performance and security, this product will certainly meet highest requirements. In case of medium-sized

and small installations, it is also possible to use an Express Edition, which does not entail any license costs.

Inventory Collection Agent

As part of the Inventory Collection Agent, the Master Server is responsible for the import or the forwarding of inventory data.

Management Console

The management tool of Columbus is the Management Console (CMC). In the Console, data can be reviewed and orders are given for the computers.

Except for a few special functions, the Console does not directly communicate with Clients, but via Master Server. This provides a highly scalable environment in which also the communication paths to be used, and thus router and firewall configurations, are clearly defined.

The Console can either be installed on a central server or on an individual administrative Client.

Important The Management Console enables the access to a variety of functions including the complete new setup of computers. The access to the Console and the definition which user should be allowed to use which functions should be well thought over in order to minimize the risk of operating errors.

InventoryScanner

The InventoryScanner is started once or in regular intervals on all computers to search the local hard disk for installed files and collect data about the existing hardware.

In addition to cyclically recording the hardware and software data, also metering data can be recorded (software usage), which are then processed in the Spider license management. Decisions on which software is currently used in the company are based on these data and thus permit to prove the use of licenses and to move unused licenses to other computers or no longer extend existing maintenance contracts.

Note In respect of the virtualization of applications or whole desktops, the observation of software usage has become the only reliable way of license evaluation. So, all this is not about monitoring the user behavior, but meeting legal requirements.

Management Client

The Management Client component is installed on the target computers and checks at each start or depending on the configuration at certain times if allocated packages are available. Following each action, a current status message is returned via Site Server to the Columbus Database.

The Management Client can be installed on a target system by using different techniques.

Note If Inventory is licensed, it may directly be controlled via the Client.

1.3.2 Data flow overview



Inventory data are collected and supplied to Spider either directly or indirectly through the Columbus infrastructure, depending on the IT environment and the Columbus components that are used.

Brainware.log

All Columbus components write into a central log file named **Brainware.log** which is saved in the system directory C: \Windows. All actions, which are executed by Infrastructure Service and Client, are logged in this file. The content of the file is regularly truncated (max. 2 MB) and may be opened and viewed in all commonly used text editors.

Note If the sStandalone InventoryScanner is executed as a simple user and if this user is not allowed to write in C:\Windows, the log file Brainware.log will be written into the public application data directory (CSIDL_COMMON_APPDATA).

Examples:

- C:\Documents and Settings\All Users\Application Data\Columbus in Windows XP
- C:\ProgramData\Columbus in Windows 7

CHAPTER 2

Installation

In this chapter

Basic Installation	15
Module installation	16

For a description of the requirements and steps for a successful installation of the Columbus basic system please refer to the **Installation** manual. This chapter describes on the peculiarities of the Inventory installation.

2.1 Basic Installation

For the installation you will need the setup file Columbus 7.5.exe and the license file License.xml. These files are available on our web site www.brainwaregroup.com > Downloads and Licenses.

Every module needs different Columbus components, which are available during installation.

C Columbus		_		\times
Choose Component Choose type of installation		brainu	Jaregi	roup
Options Master Server (Only one Site Server	per organisation)			
Own FQDN FQDN:	srv-2016-x64.bwgdemo.corp			
© Brainware Consulting & Develop	oment AG	Next >	Cano	el

The following components have to be installed at least once for each Columbus System in the network.

Component	Description
Database server	The Database Server is required to make sure that the applications are able to access the data. The Columbus Database consists of two database files and saves all data required for the management of the computers.
Infrastructure server	The Infrastructure Service provides various agents for the management of Columbus System. At least one Infrastructure Service has to be set up. It can be installed together with the Database Server on one computer.

Component	Descripti	on
Management console	Use the M pany-wic station.	Nanagement Console to administrate your Columbus System com- le. The Console can either be installed on a server or on a work-
	Note	We recommend to install and configure the Console on the cen- tral Database Server and distribute it from there by copying the directory or a Package to other computers.

2.2 Module installation

The additional components are required for the installation of Inventory.



2.2.1 NetworkScanner

Requirement

Ports

The following ports can be used for scanning depending on the set configuration.

- ARP, is not IP / port based
- ICMP, is not port based
- NetBIOS Name Service, Port 137 UDP
- NetBIOS Browser, Port 138 UDP
- SNMP, Port 161 UDP
- (optional) User data for WMI

Considerations

- The better the computer to be scanned by the scanner can be resolved per NetBIOS, DNS, Wins, the more information can be collected from the computer.
- The bigger the network, the more scanners should be used.
- Each subnet should be scanned repeatedly in order to detect probably turned off devices; some devices only reveal their information in the 2nd or 3rd turn.
- By using several scanners you can scan, e.g. independently from the subnet, at different times (server at night and on weekends, desktops on week days during the day).
- There is always one subnet that is *forgotten*, so an exact planning of the usage is required.
- Computers can only be categorized as server/desktop, if it exists in the network environment of the scan machine; only there, the required information can be queried.
- The computers used for scanning should be members of a domain, at best a member of the domain from which you expect to get the most devices.

CHAPTER 3

Centralized inventorization

In this chapter

Function of NetworkScanner	. 18
Configure NetworkScanner	. 19
Reporting	. 24
Faults and Problems	. 26

The centralized inventorization contains the **NetworkScanner** (see "**Function of NetworkScanner**" on page 18).

3.1 Function of NetworkScanner

The NetworkScanner is a module integrated in the Indexing Agent, which looks for active devices in pre-defined IP areas and adds them to the inventory using techniques like Ping, RARP, NetBIOS, SNMP, DNS reverse lookup, etc.

This technology is especially applicable for the *exploration* of unknown networks and inventorization of printers, switches, etc. which are not able to run a Management Client.

3.1.1 Network browser

The network browser is part of the NetworkScanner and determines the following values based on the information found via the network neighborhood:

- List of domains
- List of computers
- Services provided by the computers
- Type and version of the operating systems

This information is retrieved and managed by the Domain Master Browser. The information obtained by the Domain Master Browser will become obsolete, if computers are shutdown and not online for some time.

If the Domain Master Browser fails, another computer takes over this task. In this case, it can take some time until the information is available again.

3.1.2 NetworkScanner

The NetworkScanner uses a predefined list of IP addresses and processes this list according to the specifications. It uses the following methods to get results:

Method	Description
ICMP (Ping)	If the computer is online (may serve as prerequisite for further scans)
ARP	MAC address
NetBIOS	Computer name
DNS Lookup	Name which is registered with the DNS server
SNMP	<i>public</i> Determine properties of a device (contact, description, location, name)

3.2 Configure NetworkScanner

The NetworkScanner is integrated in the Indexing Agent, which is also used for configuration.

After the **agent has been activated and assigned to a functional unit** (see page 31), it may be configured.

How to configure the agent

- > Highlight the Agent in the **Infrastructure** screen.
- > Select the **Net Scanner** function in the menu ribbon.



3.2.1 Define Running Time

The running time of the NetworkScanner is usually limited to certain days and times. Per each week day, up to 8 possible *Time frames* can be configured.

- > Select the day and enter the start and end time.
- Click Add.

I The selected time range will be assigned to the next (free) time frame.

	etwork scanner settings	
Schedule IP Ranges Domains	Scanner settings	
Choose a week day: Monday	•	
List of time windows in which the	scanner is allowed to run on that day	
00:00-23:59	Add <u>R</u> emove	
	C Time Windows	
	Add a time window	
	Enter a from and to time for a n	ew time window
	Time window	
	From time: 🔟:00 🚔 🥨	
	To time : 23:59 🚔 🥨	
		Add C:
	OK Cancel	

could be affected. To delete a time frame, highlight the entry in the list and click **Remove**. You will be asked

whether you want to remove all time frames or only one specific time frame.

Note

3.2.2 Define the IP range

The network segments to be searched by NetworkScanner must be specified.

- > Enter the IP addresses in the fields **From** and **To**.
- ➢ Click Add.

Configure Ne	etwork Scanne	r Settings				
<table-cell> Help</table-cell>	Į		e twork nfigure th	scanne e settings r	er settings needed by the patcl	h deploy agent
Schedule	IP Ranges [omains	Scanner s	ettings		
Import fr	om DHCP low IP address r	anges to be	e imported f	rom a DHCP	server	
D	HCP server nan	ne:				Add
	OHCP Server					
						Remove
Ir	mpersonation D	omain				
Ir	mpersonation U:	er				
Ir	mpersonation Pa	assword				
- IP Addr	ress Ranges :					
From:	10 .	10 . 10	. 1	To:	10 . 10 . 10	. 254
					Update	Add
From	IP Address			To IP Addre	SS	
10.1	. 10. 1			10.1.10.25	4	
10.10	0.10.1			10.10.10.2	54	
					File Import	<u>R</u> emove
						IK Cancel

To simplify these entries, defined subnets of known DHCP servers can be read in.

Note Only DHCP servers running on the same domain as the NetworkScanner can be accessed.

Furthermore, use the File Import function to import the IP addresses from a CSV file. In the CSV file, one line is used to define one range, e.g.:

192.168.178.0-192.168.178.255	
10.1.10.0-10.1.12.0	
1.2.0.0-1.2.255.255	

3.2.3 Import Settings

Here you can manage the domains which are recognized by the network browser. Furthermore, you can specify, which status should be entered into the DB for the computers which belong to a certain domain.

To enable the Scanner to collect advanced information about a device (Windows), it is possible to enter additional domains, user names and passwords.

? Help		etwork seconfigure the s	canner settings ettings needed by the pa	atch deploy agent
Schedule IP Ranges	Domains	Scanner setti	ngs	
New domain and mem	ber discovery			
☑ <u>C</u> reate newly discov	vered domains	; Set	t new domain activation as	Active -
V Assign <u>d</u> efault pass	word			
This username and scanner. The scann found domains. Ple-	password will her will then us ase ensure tha	be assigned to r se this account t at the account h	newly discovered domains, fou o interrogate newly found devi as administrative rights.	ind by the network ices in these newly
Default Username:	MyAdmin1			
Default Password:	*****		Set	
 Define how known do This username and pa that you provide a use Domain name: 	assword will be arname and pa	 will get ddded i used to interrog assword with adr 	gate devices found under the o ninistrative rights in the domain	domain. Please ensure n.
 Define how known do This username and pa that you provide a use 	assword will be arname and pa	 will get dated interrog used to interrog ssword with adr 	gate devices found under the o ninistrative rights in the domain	domain. Please ensure n.
 Define how known do This username and pa that you provide a use Domain name: 	main members assword will be ername and pa bwlab	e used to interrog assword with adr	gate devices found under the ninistrative rights in the domain	domain. Please ensure n.
 Define how known do This username and pa that you provide a use Domain name: Username: 	main members assword will be ername and pa bwlab MyAdmin1	e used to interrog assword with adr	gate devices found under the oninistrative rights in the domain	domain. Please ensure 1.
 Define how known do This username and pi that you provide a use Domain name: Username: Password: 	main members assword will be ername and pa bwlab MyAdmin1	e used to interrog	Add Update	domain. Please ensure ,
 Define how known do This username and pathat you provide a use Domain name: Username: Password: Domain 	main memoers assword will be emame and pa bwlab MyAdmin1	e used to interrog assword with adr	Add Update Activation	domain. Please ensure , Password
 Define how known da This username and pa that you provide a use Domain name: Username: Password: Domain arbeitsgruppe 	main memoers assword will be ername and pa bwlab MyAdmin1 xeexeexeex	e used to interror assword with adr	Activation	domain. Please ensure Password x
 Define how known do This username and pathat you provide a use Domain name: Username: Password: Domain arbeitsgruppe autosetup 	main memoers assword will be ername and pa bwlab MyAdmin1 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	e used to interroy assword with adr	Activation	domain. Please ensure Password x x
 Define how known da This username and pa that you provide a use Domain name: Username: Password: Domain arbeitsgruppe autosetup bw 	main memoers assword will be ername and pa bwlab MyAdmin1	e used to interroy assword with adr	Activation	domain. Please ensure
 Define how known da This username and pa that you provide a use Domain name: Username: Password: Domain arbeitsgruppe autosetup bw bwg.corp 	main memoers assword will be ername and pa bwlab MyAdmin1 xxxxxxxxxxxxxx	e used to interroy	Activation Active Active	domain. Please ensure
 Define how known do This username and pay that you provide a use Domain name: Username: Password: Domain arbeitsgruppe autosetup bw bwg.corp bwg 	main memoers assword will be ername and pa bwlab MyAdmin1 xxxxxxxxxx	a used to interroy	Add Update Activation Active Acti	domain. Please ensure . Password
Define how known do This username and pa that you provide a use Domain name: Username: Password: Domain arbeitsgruppe autosetup bw bwg.corp bwg	main memoers assword will be ername and pa bwlab MyAdmin1 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	session of the region of the r	Activation Activation Active Active Ac	domain. Please ensure . Password * * * * * * * * *
Detrine how known do This username and pa that you provide a use Domain name: Username: Password: Domain arbeitsgruppe autosetup bw bwg.corp bwg	main members assword will be ername and pa bwlab MyAdmin1 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	session of the root of the roo	Active Active Active Active Active Active Active Active Active Active Active	domain. Please ensure

- ➢ In order to automatically detect and enter domains, you can check the box next to Create newly discovered...
- Use Set new domain activation as to determine which status each device of the domain will receive when added.
- In order to change the activation status for a domain already detected, highlight the desired domain and select the new status in the context menu.

3.2.4 Define Scan Type

For the settings to be used by the scanner you have to select a profile or select all settings regarding protocols, delays, desired waiting times/repeats on your own by using the Advanced profile.

- Select the desired scan setting.
- Enter the SNMP read community string that you defined in your environment (default: public).
- > Highlight the desired options (specify treatment of detected devices) and click **Next**.

Configure Network Scanner Settings	
Help Kornal scan, less bandwitch intensive, WILL trigg	scanner settings settings needed by the patch deploy agent tings Provide a SNMP read community string: public ger Intrusion Detection Systems
May import if only the IP address is discovered May import if the MAC is unknown May classify devices May import Computers May import Printers	✓ Prefer shortname over FQDN May scan for <u>A</u> MT Devices AMT Logon information : User Password
May import Switches and Routers May import Unknown Devices Protocols to scan with : May Scan With ARP May Scan With ICMP	How long should the delay between for example ARP scanning the IP, and ICMP scanning it [Default=0, and may be up to 5000 ms] Delay between Protocols: 0 ms
May Scan with Netbill's May Scan With NMP How long should the delay between one IP address scan ending, and a new one starting (Default=0and may be up to	For example, how many times should Ping retry. (Default=4, and may be up to 10) Protocol Retries :
60000) IP Scan Delay Time: 0 🕞 ms Do you want to scan this range once, many times, continuously = 0 (Default=0)	Icmp and Snmp Timeout : 3000 🖨 ms ♥ Needs ICMP Success (Default is True) ♥ Pick IP addresses randomly from configured
Scan Repetitions : 0 👚	Max Scanning Threads: 10 (is 255)

• May import if only the IP address is discovered

The IP address is imported in the database, although, except for a successful *Ping*, no other data could be detected.

• May import if the MAC is unknown

The device may be imported in the database, although the MAC address is missing.

• May classify devices

The scanner is allowed to categorize the detected devices (workstation, server, printer, router, etc.). The following may be selected in addition

- May Import Computers Computers may be imported.
- May Import Printers Printers may be imported.
- May import Switches and Routers Switches and Routers may be imported.
- May import unknown Devices Unknown devices may be imported.

May Scan for AMT Devices ٠

The scanner may be scanned according to Intel's AMT by specifying user name and password.

Parameter	Fast	Normal	Safe	Paranoid
ProtocolRetries	4	4	4	4
IcmpTimeout (ms)	3.000	300	3.000	3.000
MaxScanThreads	255	10	1	1
IPScanDelayTime (ms)	0	0	10.000	120.000
ProtScanDelayTime (ms)	0	0	10.000	120.000
Random*	0	0	0	0
ScanRepetitions**	0	0	0	0
NeedsICMPSuccess*	1	1	1	1
MayScanWithArp*	1	1	1	1
MayScanWithICMP*	1	1	1	1
MayScanWithNetBIOS*	1	1	1	1
MayScanWithSNMP*	1	1	1	1

The *Scan Settings* in the selection menu determine the following parameters:

** 0 = repeat forever

Scan Property	Description
ProtocolRetries	Specifies how often (per protocol) a new attempt is started, if no answer is received.
IcmpTimeout	Maximum waiting time for the answer to an ICMP Ping
MaxScanThreads	Maximum number of parallel scan threads
IPScanDelayTime	Waiting time after which the scan continues with the next IP.
ProtScanDelayTime	Waiting time until a thread uses the next protocol for the current IP address
Random	Specifies, whether the IP addresses will be selected in numerical order (1-10) or randomly
ScanRepetitions	Specifies how often the scan will be repeated. If '0' is entered, the scan will be repeated continuously.
NeedsICMPSuccess	In order to continue with the scan of the IP address, the Ping has to be successful (0 / 1)
May Scan With ARP	Shall use ARP to determine the MAC address (0 / 1)
May Scan With ICMP	Shall use ICMP (0 / 1)
May Scan With NetBIOS	Shall use NetBIOS (0 / 1)
May Scan With SNMP	Shall read SNMP information (0 / 1)

^{*} 1 = True / 0 = False

3.3 Reporting

3.3.1 Export Data

You can define in this report which asset data you want to evaluate. The definitions can be saved and retrieved, if necessary.

- > Select the **Reporting** menu ribbon in the Console.
- > Highlight the computers for which you would like to output information.
- > Select the function Users & Devices > Preselected details for selected objects.

					Columbus	7 Manager
Console De	rices Users Security Organisation Re-	porting Tools	Infrastructure			
xport Wizard	Users & Devices Packages Deployed	Packages Ava	lable PatchC	leploy Data Miscellareous		
	Details for selected objects	Export		4		
a - 🔄 organi	Preselected details for selected object	ts Use	s Site Manage	ment Infrastructure		
4 06 bi	Preserved details summarized		Domain	Status	MAC	Error State
	Device(s) not patch scanned recently	be001	beg		000C29AD05C7	
	Dejected software	-be002	bwg		000C29C64992	
	Number of Device in OU	-20001	bwg		000C2943FB3A	
	Degice(s) with pending actions	be001	beg		000029089034	
	- Managed Users	srv-v-doku	bwg	14.05.2013 09:18:14: Start processing.	000C29CC5FE8	
	- 🗫 Selection	arv-v-zg001	bwg		000FFE856068	
	- 🦛 Unassigned	wrk-p-be001	bwg		000C2959EE68	
	- 🌆 Urmanaged .	wrk-p-2001	burg		000C295CA378 AABBCCDDEEF2	

If this dialog is used for the first time, you have to create a *Set*, in order to obtain the corresponding information in the report.

> Select Manage Sets.

C Reporting	
	Report Options
Predefined details for user	s / devices
This report allows you to First you need to have a button "Manage Sets"). The report will then list t	build list of specific asset items. predefined list of search items (you can create / modify such sets by clicking the hese items on all selected users / devices.
Machine Report Manage Sets	ert (instead of Report formatting)
	Schedule Report Cancel

> Create a new set with **Created new Set** and give a name to the set.

> Highlight the desired components and click Add to Set.



- > Select Close.
- Select the corresponding set.
- Select **Report**.

C Data Exporter			
	Inventory data		
·==0	Shows preselected inventory da	ta on selected computers / users	
	Computer / User	Inventory Item	Inventory Value
How to use	Data set = TestReport		
You may alter the data content by using the popup menu right-clicking in the grid.	huldraft02: P1CV-llool		
Additionally you may sort the data by	bir (azgritos), bitarabece	Assets.Summary.Model	HP Compaq dc7800p Small F
clicking on the column headers or re-arrange the column order by dragging		Assets.Summary.Processor Speed (Mhz)	2667
them.		Assets.Summary.Processor Type	Core 2 Duo E6750
		Assets.Summary.Serial No	CZC80147W0
🧱 Data Export	bw/dzggotu1; Bitekautude	Assets.Summary.Serial No	HUB7450GKN
Microsoft Excel (XLS)		,	
Web Page (HTML)	bw\dzghor02; B1GKb0Lq5j		
Comma Delimited (CSV)		Assets.Summary.Serial No	CZC7413MPS
	bw\dzgkop03; B1GKb4phxd	Accelte Common DAM (MD)	2594
🖹 Copy to Clipboard		Assets.Summary.Serial No	HUB7180QNY
🗐 Default Printer			
	bw\dzgshd03; B1GKbAZgDh		
	•		•
			Close
			Close

The data for the selected computers are displayed. You can output the data in various formats:

3.4 Faults and Problems

3.4.1 Possible error sources

- Configuration of the routers and switches in the network which probably filter some of the ports
- TTL (Time To Live) in the network; if this value is set too low, some connections to remote parts of the network are probably impossible, because the package is discarded due to timeout.
- Latency / Timeouts
- The traffic load in the network can be so high that some data can get lost on the way. Alternatively, also the scanner can cause too much traffic, if incorrectly configured.
- IDS (Intrusion Detection Systems) could classify the activities of the NetworkScanner as *hostile* activities and initiate blocks or equivalents.
- On the client side, Firewalls can be responsible for the fact that the computer does not reveal any or only few information about itself.

Important When configuring the NetworkScanner, all aspects of the environment (network, computer/server, service hours, off hours, etc.) must be considered. Otherwise, if not configured correctly, the network performance may suffer up to the point where all network activities are stopped.

CHAPTER 4

Active inventorization

In this chapter

Application principle	
Configuration	
Using	
Install the InventoryAgent	40
Install Standalone InventoryScanner	

4.1 Application principle

The functions of the active inventory components are explained in this chapter.

4.1.1 Introduction

Using Management Console you can always determine, which Columbus packages are assigned to which computer. However, this will only detect, what has been installed within the structured framework of Console and Management Client. In order to be able to trace the actually installed application and release the corresponding number of licenses, an exact investigation of the hard disk, windows registry and running applications is required. This is the only way to detect manual installations, downloads and virtual applications.

4.1.2 Basic inventory

The Columbus Management Client and also PXE collect basic inventory data, such as hard disk size, partitions, IP address, MAC address, graphic card, computer model, computer manufacturer, etc.

The basic inventory data are shown in the inventory data overview in the management console:

Das	shboard	os	Softwa	re Invento	ory Securit	y Patches	Documents	Variables	Disk Management	Scheduled Actions	< >
Ha	rdware	Softv	vare C	olumbus Ass	ets Compo	nents					
	Caption	Δ				Values					^
2	Adapter					vmxnet	3 Ethernet Ada	pter			
×	Capacity	/				0					
×	Capacity	/				644203	92960				
15	Caption					Window	s NT				
C	Client Ve	ersion				DLL: 7.4	4.0.117; EXE: 7	.4.0.117			
15	Compute	er Mode	el			VMware	Virtual Platform	n			
	Count					1					
	Date					07/02/1	2				
C	Date/Tin	ne of d	ata feedb	oack		04.03.2	015 14:38:28				
2	Free					504012	80				
2	MAC Ad	dress				000C29	1433E6				
							•				~
					Filter Not Ad	tive			🍸 Filter:		

4.1.3 Software scan

Columbus Management Client, Inventory Scanner and Inventory Agent collect data on locally installed applications which have been correctly registered in the Windows software list. This list contains applications that were installed by carrying out a setup routine.

The data of a software scan are shown in the inventory data overview in the management console:

Dashboard OS Software Inventor	y Security Patches Documents Variables Di	isk Management Scheduled Actions 🛛 🚱 ≥
Hardware Software Columbus Asset	s Components	
Manufacturer 🛆	Software name	Version
Adobe Systems Incorporated	Adobe Reader XI (11.0.10)	11.0.10
📅 Igor Pavlov	7-Zip 9.20 (x64 edition)	9.20.00.0
🔠 LogMeIn, Inc.	RemotelyAnywhere	10.0.1068
Microsoft Corporation	Microsoft Visual C++ 2008 Redistributab	ole - x64 9.0. 9.0.30729.6161
Microsoft Corporation	Microsoft Visual C++ 2008 Redistributab	ole - x86 9.0. 9.0.30729.4148
Microsoft Corporation	Microsoft Windows 8.1 Enterprise	6.3.9600
Mozilla	Mozilla Firefox 35.0.1 (x86 en-US)	35.0.1
Mozilla	Mozilla Maintenance Service	35.0.1
Notepad++ Team	Notepad++	6.5.1
VMware, Inc.	VMware Tools	9.4.6.1770165
		/
Scandate : 05.03.2015 F	ilter Not Active	T Filter:

4.1.4 Hardware Scan

Columbus Management Client, Inventory Scanner and Inventory Agent collect data on the hardware integrated on the computer. This list contains all relevant data for the Spider asset and license management.

The data of a hardware scan are shown in the inventory data overview in the Management Console:

Dashboard OS Software Inventory Se	curity Patches Documents Variabl	es Disk Management Scheduled Actions	3. 3
Hardware Software Columbus Assets Co	omponets		
Caption /	Values		1
CPULogicalCount	1		
🙀 DeviceChassis	Virtual		
DiskFreeM8	0		
DiskTotalMB	61436		1
SraphicAdapter	VMware SVGA 3D		
📡 GraphicMemory	128		
C InventorySource	columbus.exe 7.4.0.117		
IPAddressV4	192.168.1.102		
PAddress//6	fe80::4153:87a6:e860:7226		
😺 Last User	user		
MAC1	00-0C-29-65-D7-C2		-
8			
Filter N	lot Active	Filter:	

4.1.5 Columbus assets

Further detailed hardware information is collected for the exclusive use in Columbus. A large number of data is not relevant for use in Spider and remain in Columbus.

The data of the Columbus assets are shown in the inventory data overview in the Management Console:

Dashboard OS Software Invento	ory Security Patches	Documents Variable	Disk Management	Scheduled Actions	< >
Hardware Software Columbus Ass	ets Components				
⊿ · 🗮 Assets	Name 🛆	Value			^
Disk	OS	Microsoft Windows 8.1	Enterprise		
⊳ 📕 Monitor	OS Version	6.3.9600			
DeratingSystem	OSClass	Client			
SMBIOS	OSLanguage	English (United States)			
⊿ 👰 Summary	PCMCIA	False			
NetworkAdapter1	Processor Manufacturer	Intel			
Role	Processor Speed (MHz)	2300			
	Processor Type	Core i7-2820QM			
	RAM (MB)	2048 16384 × 16384			
- 🕖 Patch Deploy	Screen Resolution				
▷ · 🚮 Software	Serial No	VMware-56 4d a6 e5 df c8 c9 07-8a 21 d0 49 59 65 d7 c2			~
Scandate : 05.03.2015	Filter Not Active		🍸 Filter:		

4.2 Configuration

4.2.1 What must be observed

Below you will find some tips from the practice which will help you to easily start with the system and notify you about things to be observed.

Important Due to database reasons, only one single Inventory Collection Agent can act as Importer per company at a time.

Further Infrastructure Service can be used as recipients of the scan results. However, they must be configured so that they do not import the data, but forward it to the corresponding import server.

System load

Since Importer is an independently running function, no input and output options are available. Therefore, the Importer function can only be monitored through the Brainware.log log file and by *processing* the scan results.

Settings

The options set in the configuration dialog are stored in the registry on the corresponding Infrastructure Service. Under the key

HKEY_LOCAL_MACHINE\SOFTWARE\Brainware\Columbus\7\Inventory and Asset Management\Importer

the general values for the importer are found, in the subkey *ClientReceiver* you will find the reception parameters for the OTB connection, and in the subkey *ServerTransmitter* you can select or configure a Windows share, FTP or OTB connection through which the imported data will be forwarded.

For 64-bit systems, the key is

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Brainware\Columbus\7\Inventory and Asset
Management\Importer

Configuration parameters

Use the following settings to adjust the behavior of the agent to special situations. These settings shall only be changed upon recommendation of Brainware or an authorized partner and must be made directly in the tab.

Important	An improper modification can affect the performance of the complete Columbus System.					
	CoffeeBreak					
	Value	<time in="" milliseconds=""></time>	Type: Reg_Dword			
	Reduces the lo	oad on the processor but extends the	execution time.			
	CoffeeBreak=	0				
	ImportTimeou	ut				
	Value	<timeout in="" milliseconds=""></timeout>	Type: Reg_Dword			
	Defines the time until the agent is considered to be no longer active. In this case, the thread is terminated by the Infrastructure Service. This causes an automatic restart of the agent in case of error.					
	ImportTimeout=7200					
	MaxFilesPerR	ound				
	Value	<number files="" of=""> Default=100</number>	Type: Reg_Dword			
	Defines the number of files to be processed by the agent during its execution interval of 5 minutes.					
	ImportTimeout=0x0000064 (Hex) ImportTimeout=64 (Decimal)					
	FullInventoryReplaceOld					
	Value	Yes / No (1/0) Default 1	Type: Reg_Dword			
	Deletes the ex	kisting inventory of a device and creat	tes a new one.			
	FullInventoryReplaceOld =1					

4.2.2 Activate and assign Inventory Collection Agent

The agent can only be used if it has been assigned to a company and has been activated. At the time of activation, an agent is loaded from the corresponding Infrastructure Service and its function is turned on. After that, the agent loads the standard configuration and starts working.

How to activate the agent

Navigate to the Infrastructure screen in the <CMC_C> and highlight the Infrastructure Service.

I The list below shows all agents which are available on this server.

Highlight Inventory Collection Agent.

I The menu ribbon shows all available functions.

> Select the function Assign in the General menu field.



- > Select the company from the list box and click on Apply.
 - I The related company will appear in the list under the **Company** column before the Inventory Collection Agent.
- > Select the **Activate** function in the menu ribbon.
 - I The Symbol in the first column of the table summary changes and indicates that the agent has been activated.
 - I Date and of time of the last connection are logged in the Last Contact column.

In order to determine for which part of the organization shall the agent offer its services, a functional assignment to the structure tree via drag & drop is required.

How to assign the agent to a company or site

- > Highlight Inventory Collection Agent.
- > Drag the agent per drag & drop on a **company** or **site** in the structure tree.

After this action, the agent will offer its function to the corresponding site and all the sites under it (inheritance) Such an inheritance can be interrupted by assigning a different agent on a lower level. The currently responsible agent for a site is shown in the Console on the **Site Management** tab.

4.2.3 Overview of the inventorization methods

The following overview shows the differences of the various inventorization methods and which data can be collected from them.

	Inventory- Scanner	Inventory Agent	Management Client	Net- workScanner
Installed service under Windows		✓	✓	✓
Rollout via Management Console	~		~	
Installation routine (setup.exe)		✓	✓	
Execute without installation	✓			✓
Updating detection .dll	✓	✓	✓	
HardwareScanning	\checkmark	\checkmark	✓	✓
Software Scanning	✓	✓	✓	
SW metering		~	✓	
Time-controlled planning	Outside the product	✓	✓	\checkmark
Started with login script	~			
Started with user login	✓			
Started with Windows start		~	✓	
Start without user login		✓	✓	✓
Central configuration		✓	✓	✓
Result transfer through TCP port	\checkmark	\checkmark	✓	
Result transfer through FTP	✓	\checkmark		
Prepared for further tasks (SW in- stallation, imaging, service desk)			✓	
Auto update		~	~	

4.2.4 Configure the importer

Before the scanned data can be displayed or submitted to the Spider asset management, the inventory data have to be inserted in the database. This task is carried out by the import function of the Inventory Collection Agent. In addition to the import of data from the XML scan results, the agent offers as an option also the possibility to serve as OTB server for Clients, which deliver their inventory results in this way.

After the agent has been activated and assigned to a functional unit, it may be configured.

How to configure the agent

- > Highlight the Agent in the Infrastructure screen.
- > Select the **Configure** function in the menu ribbon.

Infras	tructure			
Jobs	J Importer	Schedule	Logfile	Location
		Inventory		G.

Determining importer function

Use this register to determine how the importer shall proceed with the scan results.

	Columbus Inventory Agent Configuration	É
🕜 Help	Configure the inventory agent	
Receiver		
V Enable receive		
OTB port :	24786]
Function :	Import results O Forward results	7.
Basedir :	E:\Columbus\InvData	
Import to Columb	us	Default: Import every 5 minutes
Import time :		Note: Specify hours. E.g. 1800-0500
Default company :	MyCompany ~	Note: Where new devices will register
E Send to Spider	Data Receiver	
Note: These sets	ngs are only used for environments with Spider Recognition.	
		OK Cancel

Option	Description
Enable Receiver	This agent accepts the delivery of results through the Columbus com- munication protocol OTB.
OTB port	Freely adjustable communication port (default TCP 24786)
Function	Import into the database or forward to another Columbus server.
Basedir	Data directory used as storage location for processing scan results.
Import Time	Time frame during which the delivered scan results can be imported into the Columbus database. (Default: always)
Default company	Company to which the unknown devices must be registered.

Forwarding scan results

If the relevant Inventory Collection Agent shall not import the scan results directly into the database but simply collect and forward them, this can be set by the corresponding configuration:

	G	olumbus Inventory Agent Configuration	n					
👔 Help		nventory Agent onfigure the inventory agent						
Receiver	Receiver							
	24706							
Eurotion :	Caroo	Eormard results						
Basedir:	E:\Columbus\Inv	Data						
			실					
Forward to Colu	mbua							
Forward to Cold	mbus		-					
OTD	and damage	0 TD 2470C						
OTB server :	srv-demo	✓ OTB port : 24786						
OTB server : BandWidth :	srv-demo	OTB port: 24786	Unlimited					
OTB server : BandWidth : Forward time :	srv-demo	OTB port: 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.o. 1800-0500					
OTB server : BandWidth : Forward time :	srv-demo	✓ OTB port: 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500					
OTB server : BandWidth : Forward time :	srv-demo	OTB port: 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500					
OTB server : BandWidth : Forward time :		✓ OTB port: 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500					
OTB server : BandWidth : Forward time :	srv-demo	OTB port : 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500					
OTB server : BandWidth : Forward time :		OTB port : [24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500					
OTB server : BandWidth : Forward time :		OTB port : 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500					
OTB server : BandWidth : Forward time :		OTB port : [24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500 OK Cancel					
OTB server : BandWidth : Forward time : Option		OTB port : 24786	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500 OK Cancel					
OTB server : BandWidth : Forward time : Option OTB server		Description Target server on which another Inver ready to receive.	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500 OK Cancel ntory Collection Agent is					
OTB server : BandWidth : Forward time : O ption OTB server OTB port		OTB port : 24786 Description Target server on which another Inveready to receive. User-definable port for transfer thron nication protocol OTB (default 2478)	Unlimited Default: Forward every 5 minutes. Note: Specify hours. E.g. 1800-0500 OK Cancel ntory Collection Agent is ugh the Columbus commu- 5)					

Forward time	Time frame during which the delivered scan results can be for-
	warded. (Default: always)

Export to Spider

Columbus Inventory Agent Configuration								
<table-cell> Help</table-cell>		nventory Agent						
Receiver	Receiver							
🛛 Enable receive	ſ							
OTB port :	24786							
Function :	Import results	Forward results						
Basedir :	E:\Columbus\Inv	Data 🔁						
Import to Columb	us		Default: Import every 5 minutes.					
Import time :			Note: Specify hours. E.g. 1800-0500					
Default company :	MyCompany	~	Note: Where new devices will register					
🛛 Send to Spider	Data Receiver		- Togloton					
Spider Data Rec OTB server : BandWidth : Customer ID :	eiver mySpider.bwgde HYID123-ABC-E	mo.corp OTB port : 24786	Unlimited Default: Use EDC from company. Note: Define ID as default if company has no default. OK Cancel					
Option		Description						
OTB server		Target server on which the Spider dat ceive.	ta receiver is ready to re-					
OTB port		User-definable port for transfer throun nication protocol OTB (default 24786	ugh the Columbus commu-)					
Bandwidth		Bandwidth control for the transfer						
CustomerID		Customer ID for the Spider environm	ent					

4.2.5 Configure InventoryScanner

The easiest way to configure the Columbus Inventory Scan is by using a Client Config Template. The wizard can be displayed by selecting the menu item "Config Template" on the menu ribbon:

C	Manage client configuration template
Help Templates CH-Server CH-ZG-Standard CH-ZG-Standard CH-ZG-Cloud HH-Standard JP-Standard MyCompany MyCompany - Site	Client configuration templates Configure the selected client configuration template Connection Login Account(s) Client Defaults Startup Options Local Paths Configuration OTB configuration Here you can configure the OTB (Object transfer bus) configuration. OTB allows you to execute function on remote systems and therefore improves speed and reduces network traffic. OTB server srv-demo.bwgdemo.corp V OTB port 24784 Bandwidth limitation 0 Bit/second
 Add new template Copy selected template Delete selected template Rename selected template Save template to file Who has this template Assign to selected device(s) Assign to selected tree node 	Compress data W Warning: Do not assign this template to any Columbus Infrastructure server as it will delete the database connection settings and cause the Columbus Infrastructure server to fail.
	Save <u>c</u> urrent Save <u>a</u> ll Close

Select an existing template or create a new one; then, navigate to the configuration tabs.

Inventory Common

C	Manage client configuration template
🕐 Help	Client configuration templates Configure the selected client configuration template
Templates	Patch scanning Data backup Inventory Common Inventory Spider
CH-Server CH-ZG-Pilot CH-ZG-Standard CH-ZG-Training CH-ZG_Cloud HH-Standard JP Standard	General I Embedded scanner Random start delay 0 minutes I Columbus asset data I Auto update scan DLL
MyCompany - Site MyCompany - Site	Communication Offline FTP Inst srv-demo.bwgdemo.corp Port 24786
Add new template Copy selected template Copy selected template Copy selected template Rename selected template	
Save template to file Save template to file Who has this template	Inventory scanner / agent ✓ Auto update agent
 Assign to selected device(s) Assign to selected tree node 	Home path MyCompany V
	Get config for inventory agent Get config for inventory scanner
	Save <u>current</u> Save <u>all</u> Close

Option	Description
Embedded scanner	Activation of the inventory scanner included in the management client.
Columbus asset data	Creation of the inventory data reserved for Columbus.
Auto update scan DLL	Automatic update of the additional DLL prepared by Spider, which collects additional data especially for use with Spider li- cense management.
Random start delay	To avoid that all scanners start at the same time on a virtual sys- tem, the scan process is delayed at random within the specified period.
Offline / FTP / OTB	Information about the communication or the offline operation (e.g. inventory scanner on USB stick)
Scan interval	Interval control
Auto update agent	Automatic update of the inventory agent with centralized in- stance (not for inventory scanner)
Home path	Target site on which currently unknown computers are to be reg- istered if different from the default on the inventory importer.
Get config for inventory agent	Creates a configuration file for the inventory agent. This file also contains information from the "Inventory Spider" tab.
Get config for inventory scanner	Creates a configuration file for the inventory scanner. This file also contains information from the "Inventory Spider" tab.

Note: No additional configuration file must be created for the management client. It is enough to assign the client config template to an organization site by drag & drop or directly to individual computers.

Inventory Spider

	Manage client configuration template
 Help Templates CH-Server CH-2G-Filot CH-2G-Filot CH-2G-Training CH-2G Cloud HH-Standard JP Standard MuCompany MuCompany - Site Add new template Copy selected template Delete selected template Delete selected template Rename selected template Save template to file Who has this template Save template to file Much as this template Assign to selected device(s) Assign to selected tree node 	Client configuration templates Configure the selected client configuration template Petch scanning Data backup Inventory Common Inventory Spider Ceneral Note: These settings are only used for environments with Spider recognition. ✓ East Spider recognition data Drives Extensions • EXE Path filter Paths (e.g %windif%\temp) • g % Software metering
	Save <u>c</u> urrent Save <u>a</u> ll Close
Option	Description
Get Spider recognition data	Collection of additional data for exclusive use with the Spider as set and license management.
Drives	Information about local drives that must be scanned. (Default-

Drives	Information about local drives that must be scanned. (Default: all local drives, no network drives)
Extensions	Extensions to be used for the Spider data collection (default: .exe files only)
Path filter	Directories to be excluded from the scan
Software metering	Collecting data on the software usage

4.3 Using

4.3.1 Distributing InventoryScanner

In order to be able to add a computer to the inventory and search the hard disk for installed software, the InventoryScanner has to be executed on this computer, start a computer analysis and transfer the results to a server for evaluation.

There are several possibilities to initiate this execution – depending on whether it is a onetime or repeated inventorization – but also with regard to the possibilities offered by the system.

Typical distribution methods:

- As package via software distribution
- In a login script
- Manual inventorization by means of a memory stick
- Attachment of an E-Mail, which the user executes

Prior to migrations or changeover to a software management system, a one-time scan of the computer is recommended to determine the actual status of the IT landscape. In such environments, there is often no software distribution mechanism. In this case, using a login script is the easiest option, since the manual inventorization - using a memory stick and walking from computer to computer - is very time-consuming, and often not all of the computers are included. However, you can send an E-Mail to certain people containing the instruction to execute the program once. The InventoryScanner may be used completely independent of Columbus, you even do not need a Database Server on the site.

In a managed environment, scanning the computers in regular intervals is essential in order to detect modifications of the hardware or recently installed software. You will need mechanisms for the time-controlled starting of the scanner and you must be able to regularly update the configuration and product definitions.

Note If the InventoryScanner is executed normally in the user context, the user needs writing rights in the directory used to save the scan result. In the EDC mode, the scanner is always executed when starting and stops after running.

Standalone operation

The InventoryScanner has been designed so it can also be used completely independent from Columbus. For this purpose, the scanner files are required on the Client.

The scanner is started typically from a script, such as the login script, or using a batch file.

4.4 Install the InventoryAgent

We basically recommend to use the Management Client for using inventory data as well as client management functions.

If only inventory data must be collected, ColumbusInventoryAgent.exe will be used. Different scenarios are recommended depending on the customer's environment. The list is not concluding.

4.5 Install Standalone InventoryScanner

For computers on which no Management Client has been installed, the InventoryScanner can be directly installed from the Management Console by using the function "Rollout Inventory Scanner".

Typical distribution methods:

- As package via software distribution
- In a login script
- Manual inventorization by means of a memory stick
- Attachment of an e-mail executed by the user

In order to use this function, the computers must already be entered in the database. These can be manually entered in the management console, imported from the active directory by using LDAP import, imported from a CSV file or registered by PXE.

How to carry out a rollout

Highlight the desired computer in the Workplace screen and select Rollout > Inventory Scanner from the context menu.

All Tasks	•
Rollout	 Management Client
Selection	, 👘 Inventory Client
View	Infrastructure Server
Sort by	Management Console

Note

If only Standalone InventoryScanner (without Management Client) is to be installed, the Standalone InventoryScanner must be called separately, e.g. by login script or Registry Run Key. This is not part of the rollout process.

- > The available rollout directories are listed in the rollout dialogs. Highlight the desired entry.
- Specify the necessary data for the access to the Windows directory on the computer and the desired options.
- Click Rollout.
- Acknowledge the security message to install the highlighted components on the selected computer.
 - I The Rollout Progress field shows the progress of the rollout process and faults, if present.

If you have selected the **Agent based rollout** option, then the agent takes care of the distribution in order to connect to computers which are not online at the moment. In this case, the dialog will be closed automatically. On the affected computers, a distribution action is entered on the *Scheduled Actions* tab.

Columbus Client Rollout		an Xaa
🕜 Help	Client Rollout Define details for a client rollout	
Reporting	Rollout Information Client versions available for rollout: Columbus Client 7.3.0	
	Connection Information ADMITs Additional transformer of the Windows installation directory on target systems. Edit this value only if you have changed this on your devices. Remote Admin Share	
	Agent based tolout Specify the time delay between rolout retries to a specific device when the rolout failed Rollout Q	lose

Note

columbus

Field	Description
Versions available for rollout	Versions available for rollout. Please select the desired Client from the list.
	Note Only clients from version 7.1 contain also the InventoryScanner in the Management Client.
Remote Admin Share	Network drive of the Windows directory, e.g. C:\Windows. By default, this directory is shared as ADMIN\$.
Domain / User	Domain and user name with local administrator rights for access to ADMIN\$.
	If no user is specified, the Console establishes a connection with your own Windows user account, under which you are logged in.
	If the connection with the specified account cannot be established, the Console will try all accounts entered under <i>Connecting User</i> one after another until a connection can be established.
Password	Password of the specified user for the installation.
Agent based Rollout	The rollout can also be transferred to the Columbus Base Agent on the assigned Infrastructure Service. Thus, the distribution will take place in the background and over a longer time period. This minimizes the effort considerably, if certain computers are not turned on.
If you are in possessior ify a special user. Pleas ents are not disabled b cially the restrictive W	n of administration rights on the target system, you do not need to spec- se ensure, that the administrative network drives (ADMIN\$) of your Cli- by Group Policy settings and therefore not accessible. Please note espe- indows default setting.
Before carrying out the the context menu to cl	e rollout you can use the All Tasks > Check Online Status function from heck whether these computers have been turned on. If not, you can ei-

Before carrying out the rollout you can use the **All Tasks** > **Check Online Status** function from the context menu to check whether these computers have been turned on. If not, you can either use the **Power On** context menu function to turn on the computers or transfer the rollout to an agent which keeps trying to reach the computers within a time period of one week.

CHAPTER 5

Annex

In this chapter

Manage inventory data in the Console	43
Additional inventory values for Spider	45
Installer for the Standalone InventoryScanner	46

5.1 Manage inventory data in the Console

5.1.1 Collecting own inventory data

The easiest but also most costly and error-prone way of collecting inventory data is to enter and update them manually. In addition to the automatic functions for collecting technical data, there is also the option of manually capturing, assigning and managing Asset Data tailored to your requirements in the Console.

- > In the Devices or Users window, highlight one or several computers or users.
- > Select Inventory > Edit manual asset data in the context menu.

	Custom Tasks		000023143
	Custom Tasks		000C2965D
	Push Processing Ctrl+S		000C298D5
	New Device Ins		000C29516
	Classe Devices Chilly C		000C29097
	CIONE DEVICE CLI+C		70000000
8	Delete Device Del		
	Maintenance	۲	cuments Variables Disk Management
	Operation	۲	
	Inventory	۲	Push Inventory Scan
	Remove & Reset	۲	Remote Inventory Ctrl+I
	Others	۲	Edit manual asset data Ctrl+M
	List Operations	۲	Re-Deliver Inventory
Ũ	Device Properties F2		Delete & Re-Deliver Inventory

This will open the dialog Edit manual Asset Data.

🧲 Edit manual Asset Data	
P Help Manage Asse Asset Data Manage Click on an item in the tree. If you are managing manual displayed in the combo box, otherwise it will be blank. Se the Delete button to remove the value for the selected ite To manage the set of manual items, right click in the left	et Data ement items for exactly one object, the associated value will be t the approriate value and click the Update button, or press em. pane.
Manual asset items:	Value for [1 machine]:
	Glose

Via the context menu, you may configure a data structure to create the data to be collected in clearly laid out way. For this purpose, the commands "Add Item to current tree", "Add Main tree item" and "Remove item" are available.

After you have configured the desired structure, you may select an element and enter the desired value in the Value field. Values collected earlier could also be selected in the dropdown box which reduces the collection work and allows for a more consistent data acquisition.

If a value has been entered for an entry in the structure, this is displayed under the tab "Asset/Parameters" of the corresponding computer or user. Structure entries without assigned value are not shown in this list. All entered values - like the automatically supplied ones - are available for evaluations, as e.g. reporting or export.

Note These data cannot be exported to Spider.

5.1.2 Re-Deliver / Delete & Re-Deliver Inventory

Use the *Re-Deliver Inventory* function to re-create the inventory of highlighted computers or users and enter it into the database, independent of scan intervals (daily, weekly, etc.).

- > In the Devices or Users window, highlight one or several computers or users.
- Select All Tasks > Inventory > Re-Deliver Inventory in the context menu to force a re-delivery.

- or -

Delete & Re-Deliver Inventory, to delete **all** existing inventory entries and force a re-delivery.

> Confirm the security message with **OK**.

The *Delete & Re-Deliver Inventory* function deletes all entries, also the manually entered asset data; after that, a new query is started for the inventory data of the highlighted computers/users. This function is useful, if e.g. there have been modifications in the structure of the inventory data and you want to get rid of all old entries.

Note

Both functions require that the Management Client runs on the computer in order to find new inventory values. This can be forced in the context menu with "Process SW Update" (CTRL+S).

However, this only works for the inventory data delivered by the Management Client; the inventory data determined by the InventoryScanner remain unchanged.

5.1.3 Push inventory data

The function *Push Enhanced Inventory Processing* enables to initiate an inventory scan, even if the set time cycle for an inventory scan has not been reached on the client side. This causes the inventory data to be updated as fast as possible provided that the computer is online.

Ctrl+I

Push' Enhanced Inventory Processing

Remote Inventory

- > Highlight one or more computer(s) in the Devices window.
- > Select **Push Enhanced Inventory Processing** in the context menu to force a re-delivery.

Alternatively, a remote inventory can also be requested over the WMI technology.

- > Highlight one or more computer(s) in the Devices window.
- > Select **Remote Inventory** in the context menu to force a re-delivery.

Kemote Inve	fitory	Inventoriz Active inventor	ze Active ry of online de	Devices vices using WMI teo	chnology
Connec Specify to use a User Various and oth protoco www.m invento	tion Information— the credentials rei n administrative u parameters such a ers may cause WH ed in brainware.lo crosoft.com) then y	quired to connect W serid. Passwor as missing Windows Al to fail on a target g. Please use Micro to analyze the caus	/MI on the remote credentials, grou system. If this oc soft W/MI Explore e of the failure be	e devices - it is recomme policy, DNS resolution curs the error reported i r (available at fore using Columbus re	ended n s mote
WMI 6	ased inventory may	y take significant tim	e. Please be pati	ent	
	Selected 1	Running 0	O O	Failure 0	
				Start	Close

5.2 Additional inventory values for Spider

The computer can collect additional values for Spider. The following scenario is supported by all active inventory components.

In order to prepare further values for Spider, data can be written in the registry of the computer for which the data are to be collected. These values are automatically collected on the next active scan.

Path in the registry:

HKLM	<pre>NSoftware32bit\Brainware\Columbus\7\ExternalInventoryData</pre>
REG_	SZ, REG_DWORD and REG_QWORD are supported.
Exam	ple:
_ট S	etup - Columbus Inventory Scanner (itm2go) —
it	tm2go Domain Information get the Registered Domainname from itm2go?
	Please enter your itm2go Domainname which you use by Registering on portal.itm2go.com.
	itm2go Domain: ACME INC
	Next > Cancel
These necte	e three values will be transferred through Columbus to Spider (if a Spider system is co rd).
Colur	nbus does not check or import these values into the Columbus database

Note

5.3 Installer for the Standalone InventoryScanner

The Columbus InventoryScanner installer provides a pre-configured installation of the Standalone InventoryScanner. This can then be used to install the InventoryScanner.

5.3.1 Configuration

File storage

In the installation directory of the Infrastructure Service you will find the files required for creating the setup under the directory \Setup\ClientGenerator.

								×
🕞 🕞 🗢 📕 « Program	Files (x86) 🕨 Columbus	 Setup ClientGeneration 	ator 🕨	👻 🍫 Search C	ClientGenerator			Q
Organize 🔻 😭 Open	Include in library 🔻	Share with 👻 🛛 N	ew folder		8==	•		0
★ Favorites	Name	^	Date modified	Туре	Size			
📃 Desktop	NSISUnicode246		19.08.2013 14:37	File folder				
🚺 Downloads	Source		19.08.2013 14:39	File folder				
📃 Recent Places	C7_Columbus_Clie	nt_Setup_Unicode	19.08.2013 14:38	Windows Batch File	2 KB			
	C7_Columbus_Clie	nt_Setup_Unicode	19.08.2013 14:38	Text Document	1 KB			
🥽 Libraries	C7_Columbus_Clie	nt_Setup_Unicode.nsi	15.07.2013 08:04	NSI File	29 KB			
Documents	C7_Columbus_Inve	entory_Scanner_Setup	19.08.2013 14:39	Windows Batch File	2 KB			
🌙 Music 🗧	C7_Columbus_Inve	entory_Scanner_Setup	19.08.2013 14:39	Text Document	1 KB			
Pictures	C7_Columbus_Inve	entory_Scanner_Setup	23.07.2013 05:22	NSI File	26 KB			
Videos	💪 Columbus Invento	ry Scanner 7.3.0	19.08.2013 14:39	Application	8'045 KB			
	💪 Columbus Manage	ement Client 7.3.0	19.08.2013 14:39	Application	28'086 KB			
📜 Computer	NotificationSvc		05.08.2013 06:27	Application	10'206 KB			
Folder / File		Explanation						
\NSISUnicode246		Open Source application to establish Windows Installer. All NSIS parts required to create a setup are found in this folder.						
\Source\Inventor	yScanner	The source files for the Standalone InventoryScanner of this directory are updated every time that the Infrastructure Service is updated.						
C7_Columbus_In ner_Setup_Unico	ventory_Scan- de.bat	Batch file to initiate the build process of the installer.						
C7_Columbus_In ner_Setup_Unico	ventory_Scan- de.log	Log file of the build process						
C7_Columbus_Inventory_Scan- ner_Setup_Unicode.nsi		Control file used by NSIS to create the Management Client in- staller					nt in-	
Columbus Inventory Scanner 7.3.0.exe		Complete installation file						

Creating the setup

The setup is started by calling the file "C7_Columbus_Inventory_Scanner_Setup_Unicode.bat". After the setup has been processed, the file "Columbus Inventory Scanner 7.x.x.exe" is created.

5.3.2 Installation on target devices

Note Administrator rights are required for installation.

Manual installation

Setup can be normally started by double clicking the Columbus Inventory Scanner 7.3.x file. The following dialogs are made available:

Installer La	inguage 💽	
C	Please select the language to use during installation.	
	English	
	OK Cancel	
Selection	of the installation language	

Columbus Inventory Scann	er Setup	
columbus	Welcome to the Columbu Scanner Setup	s Inventory
	Setup will guide you through the installatio Inventory Scanner. It is recommended that you dose all other before starting Setup. This will make it pos relevant system files without having to rel computer. Click Next to continue.	n of Columbus applications sible to update soot your
	Next >	Cancel

Welcome dialog

🕻 Columbus Inventory Scanner Setup	
Choose Install Location Choose the folder in which to install Columbus Inventory Scanner.	brainmaregroup
Setup will install Columbus Inventory Scanner in the following fold folder, click Browse and select another folder. Click Next to contin	ler. To install in a different nue.
Destination Folder C:\Program Files (x86)\Columbus\Inventory Scanner.	Browse
Space required: 26.3MB Space available: 16.3GB © brainwaregroup	Next > Cancel

Specification of the installation path for scanner installation

Columbus Inventory Scanner	Setup	
Choose Components Choose which features of Colum to install.	bus Inventory Scanner you want	brainwaregroup
Check the components you wan install. Click Install to start the ir	t to install and uncheck the compon Istallation.	nents you don't want to
Select components to install:	Columbus Inventory Scan Startup Options HKLM Run Key HKLV Run Key Task Scheduler Machine Autostart Folder	der
Space required: 26.3MB		
© brainwaregroup ———	< Back	Install Cancel

Selection of components

Installation options	Explanation				
Columbus Inventory Scanner	Scanner installation				
HKLM Run Key	In the tab under HKEY_LOCAL_MACHINE\SOFTWARE\ <wow6432node>1\Microsoft\Window s\CurrentVersion\Run, an entry is created that starts the scanner. For each logged-in user, the scanner 1 of the Hive Wow6432Node is enable only on 64-bit machines and is the storage location for 32-bit programs.</wow6432node>				
HKCU Run Key	In the tab under HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion \Run, an entry is created that starts the scanner for exactly this logged- in user. For other users that log-in in the machine, the scanner is not started.				
Task Scheduler	In the task scheduler of the machine, an entry is created than runs the scanner daily at 01:00. Further parameters can be set during the silent installation for the extended configuration of the task scheduler. The method is recommended to scan servers, since nobody must log-in in the machine in this case.				
	Note The creation of tasks is not supported under Windows XP!				
Machine Autostart Folder	Creates a shortcut to the scanner in the autostart folder of the machir When a user logs-in, the scanner is run.				
User Autostart Folder	Creates a shortcut to the scanner in the autostart folder of the user logged-in during installation. For other users that log-in in the machine, the scanner is not run.				

Note

When "HKCU Run Key" and "User Autostart Folder" are used, observe that the scanner will only be run for the user that was logged-in in the machine when the scanner was being installed.

Therefore, we recommend to use the methods "HKLM Run Key", "Task Scheduler" and "Machine Autostart Folder" only.

Installation Complete		
Setup was completed success	fully.	brainwaregro
Completed		
Installing Columbus Invento bwscan.exe process(es) fou Terminating bwscan.exe suc Creating Uninstaller Writing Uninstall Information Completed	y Scanner nd, now terminating them. cessful.	
© brainwaregroup		
	< Bad	Next > Cancel
	< Bac	Next > Cancel
nstallation process	< Bad	< Next > Cancel
nstallation process	< Bad	< Next > Cancel
Columbus Inventory Scann	er Setup Completing the Scanner Setup	Columbus Inventory
Columbus Inventory Scann	< Bad er Setup Completing the Scanner Setup Columbus Inventory Scar computer.	Next > Cancel Cancel Columbus Inventory
Columbus Inventory Scann	< Bad er Setup Completing the Scanner Setup Columbus Inventory Scar computer. Click Finish to dose Setup	Next > Cancel Cancel Columbus Inventory
e Columbus Inventory Scann	< Bad er Setup Completing the Scanner Setup Columbus Inventory Scar computer. Click Finish to dose Setup Run Columbus Inventor	Cancel Columbus Inventory Colum
Columbus Inventory Scann	< Bad er Setup Completing the Scanner Setup Columbus Inventory Scar computer. Click Finish to dose Setup Run Columbus Inventory brainwaregroup - Home F	c Next > Cancel Columbus Inventory Invertory

Note After the installation, the scanner can be immediately started by ticking the "Run Columbus Inventory Scanner" option.

Automated installation (silent)

When "Columbus Inventory Scanner 7.x.x.exe" is called with parameter "/S", the setup is installed in the silent mode without dialogs.

Note Upper and lower case is important when using the parameter /S. Please use an upper case «S».

5.3.3 De-installation

-

Manual de-installation

The manual de-installation can be initiated from the control panel.

🕒 🗢 🗹 🕨 Control Panel 🛛	Programs Programs and Features	✓ Search Prog	rams and Features	ļ		
Control Panel Home	Uninstall or change a program					
View installed updates	To uninstall a program, select it from the list and then	click Uninstall, Change, or Repai	ir.			
🗿 Turn Windows features on or	ro annistan a program, secere norm are net and area anet officially, change, of repairs					
off	Organize 🔻			• 🔞		
Install a program from the network	Name	Publisher	Installed On	Size		
	T-Zip 9.20 (x64 edition)	Igor Pavlov	14.05.2013	4.53		
	🗶 Columbus	brainwaregroup	01.05.2013			
	Columbus Inventory Scanner	brainwaregroup	19.08.2013			
	Columbus LCM	Brainware Solutions AG	13.05.2013			
	Microsoft .NET Framework 4 Client Profile	Microsoft Corporation	03.05.2013	38.		
	Microsoft .NET Framework 4 Extended	Microsoft Corporation	03.05.2013	51.9		
	🛱 Microsoft Report Viewer Redistributable 2008 SP1	Microsoft Corporation	03.05.2013			
	Microsoft SQL Server 2008 R2 (64-bit)	Microsoft Corporation	03.05.2013			
	Microsoft SQL Server 2008 R2 Native Client	Microsoft Corporation	03.05.2013	6.0		
	Microsoft SQL Server 2008 R2 Policies	Microsoft Corporation	03.05.2013	98		
	Microsoft SQL Server 2008 R2 Setup (English)	Microsoft Corporation	03.05.2013	39.3		
	Microsoft SQL Server 2008 Setup Support Files	Microsoft Corporation	03.05.2013	24.8		
	Microsoft SQL Server Browser	Microsoft Corporation	06.05.2013	8.9		
	Compact 3.5 SP2 ENU	Microsoft Corporation	03.05.2013	3.3		
	Hicrosoft SQL Server Compact 3.5 SP2 Query Tools E	Microsoft Corporation	03.05.2013	4.63		
	Microsoft SQL Server System CLR Types (x64)	Microsoft Corporation	03.05.2013	1.12		
	Hieraraft COL Conver VCC Writer	Microsoft Corporation	02 05 2012	2 50		
				P		
	Currently installed programs Total size: 40	1 MB				
	20 programs installed					

De-installation from the control panel

Automated de-installation (silent)

The file "C7_Inventory_Scanner_Uninstaller.exe." is located in the installation directory of the inventory scanner.

					X			
	DOKU (C:) Program Files (x86) Columbus	 Inventory Scanner 	✓ Search II	nventory Scanner	Q			
Organize 🔻 🖬 Open New folder								
☆ Favorites	Name	Date modified	Туре	Size				
🧮 Desktop	C bwscan	05.08.2013 06:31	Application	12'152 KB				
〕 Downloads	bwScan_GE.Ing	26.04.2012 13:08	LNG File	5 KB				
🕮 Recent Places	bwScan_JP.Ing	07.03.2012 10:03	LNG File	6 KB				
	bwScan_LANG.Ing	07.03.2012 10:03	LNG File	2 KB				
📜 Libraries	bwScanReadMe	07.03.2012 10:03	Text Document	1 KB				
Documents	C7_Inventory_Scanner_Uninstaller	19.08.2013 15:21	Application	330 KB				
J Music	CollectBWSupportFiles	05.08.2013 07:40	Application	8'941 KB				
Pictures	Columbus	19.08.2013 14:39	Configuration sett	19 KB				
📑 Videos	🚳 gdiplus.dll	07.03.2012 10:03	Application extens	1'607 KB				
	C HwScan	05.08.2013 06:29	Application	4'188 KB				
👰 Computer								
🏭 SRV-V-DOKU (C:)								
🍌 ad88aa759d80a								
📕 f889997b30039								
퉬 inetpub								
퉬 PerfLogs								
🌗 Program Files								
🌗 Program Files (
🍌 SourceLog								
Sourcen	•							
C7_Inventory Application	Scanner_Uninstaller Date modified: 19.08.201: Size: 329 KB	3 15:21 Date crea	ted: 19.08.2013 15:21					



This file can be opened with the parameter "/S" to execute automatic de-installation.



Silent de-installation

Note

When the parameter /S is used, upper and lower case is important. Please use an upper case S.