

ATHEX Gateway

ATHEX Gateway Server Installation Instructions

Version 2.0.0.4



**A T H E N S
E X C H A N G E S . A .**

**Technological Systems & Services Directorate
Trading Systems Development Department**



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1 Introduction

This document describes the instructions for the full installation and parameterization of ATHEX Gateway environment in ATHEX Member's site. ATHEX Gateway Server consists of two software packages:

- ATHEX Gateway Server including:
 - ODL Service running on ATHEX Gateway, implementing ODL API interface
 - ASE Service running on ATHEX Gateway, implementing FIX protocol interface.
- ODL CLIENT API installed on member's ODL Client systems.

The supported operating systems for the ATHEX Gateway Server are the following:

- **Microsoft Windows Server 2003 SP2**
- **Microsoft Windows Server 2008 R2**



2 Installation Kit

The following items are necessary for the installation of ATHEX Gateway:

- An **Installation Kit**, the contents of which are described in Paragraph 2.1: ATHEX Gateway Installation Kit. The installation kit is available at oasis' home page: <http://www.ase.gr/oasis/>
- One **INSTALLATION FORM** containing all the installation parameters needed. This form must be available to the person responsible to install the environment. When the notation **Text** is used in the present document, that person should find and fill the correct value from the **INSTALLATION FORM**.

2.1 ATHEX Gateway Installation Kit

The contents of ATHEX Gateway Installation Kit are the following:

INSTALL.BAT

Script for the semi-automated installation of the ATHEX Gateway application

UPGRADE.BAT

Script for upgrading the ATHEX Gateway installation.

UNINSTALL.BAT

Script for the semi-automated de-installation of the ATHEX Gateway application

RESTART_ATHEX_GW_AS_PRIMARY.BAT

Script for restarting the backup ATHEX Gateway services in primary mode. To be used in primary/backup ATHEX Gateway setups when the primary gateway has failed for some reason.

RESTART_ATHEX_GW_AS_BACKUP.BAT

Script for restarting the primary ATHEX Gateway services in backup mode. To be used in primary/backup ATHEX Gateway setups.

STOP_ALL_SERVICES.BAT

Script that stops both ATHEX Gateway services. It is called by other scripts.

STOP_SERVICE.BAT

Script that stops a service. It is called by other scripts.

CONFIGURE_SERVICE_LOGON.BAT

Script to securely set the logon account to be used by the ATHEX Gateway Services.

UTIL\SubInACL\SUBINACL.EXE

Program used to set the security access of the ATHEX registry keys (part of Microsoft Windows Server 2003 Resource Kit and Support Tools).

KILL.EXE

Utility for terminating the ATHEX Gateway services if they cannot be stopped normally. It is used by the Stop_Service.bat script.

The Installation Kit Parts for all ATHEX services and interfaces are described in the next paragraphs.

2.1.1 ODL Gateway Service Installation Kit Part

The contents of ODL Gateway Service Installation Kit part are the following:



INSTALL_ODL.BAT

Script for the semi-automated installation of the ODL Service application

UNINSTALL_ODL.BAT

Script for the semi-automated de-installation of the ODL Service application

ETS_JMCT.DLL

Software library for the ODL Service application

ETS_SERVICE.EXE

Basic module of the ODL Service application

ETS_SERVICE.REG

Registry entries file containing the entries needed in the Registry for the installation of the ODL Service application on Windows Server 2003

ETS_SERVICE64.REG

Registry entries file containing the entries needed in the Registry for the installation of the ODL Service application on Windows Server 2008 R2 systems

ETS_SERVICEPS.DLL

Software library for the ODL Service application

ETS_ORACLE.DLL

Software library for the ODL – Oracle Client Interface

DUMPLOG.EXE

Utility for producing ODL Service Statistics

CREATE_STATISTICS.EXE

Utility that calls the DUMPLOG.EXE utility for producing the statistics and then sends the produced statistics to ATHEX for further analysis.

2.1.2 ASE Service Installation Kit Part

The contents of ASE Service Installation Kit part are the following:

INSTALL_ASE.BAT

Script for the semi-automated installation of the ASE Service application

UNINSTALL_ASE.BAT

Script for the semi-automated de-installation of the ASE Service application

COMMONLOGGER.DLL

Software library for the ASE Service application

MESSAGER2.DLL

Software library for the ASE Service application

FIX44_PROTOCOL.DLL

Software library for the ASE Service application

ODL5_PROTOCOL.DLL

Software library for the ASE Service application



ODL5_TRADER.DLL

Software library for the ASE Service application

TCP_SERVER_LISTENER.DLL

Software library for the ASE Service application

FILENETLOGGER.DLL

Software library for the ASE Service application

ASE_SERVICE.EXE

Basic module of the ASE Service application

ASE_SERVICE.REG

Registry entries file, containing the entries needed in the Registry for the installation of the ASE Service application on Windows Server 2003

ASE_SCHEDULER.REG

Registry entries file, containing the entries needed in the Registry for the addition of a new ASE Service scheduler on Windows Server 2003

ASE_SERVICE64.REG

Registry entries file, containing the entries needed in the Registry for the installation of the ASE Service application on Windows Server 2008 R2 systems

ASE_SCHEDULER64.REG

Registry entries file, containing the entries needed in the Registry for the addition of a new ASE Service scheduler on Windows Server 2008 R2 systems

FIX2ODL.EXE

Utility to transform ASE Service's log file to ASCII format.

2.1.3 XNET Interface Installation Kit Part

The contents of XNET Interface Installation Kit part are the following:

INSTALL_XNET.BAT

Script for the semi-automated installation of the XNET interface

UNINSTALL_XNET.BAT

Script for the semi-automated de-installation of the XNET interface

ETS_SERVICE_XNET.REG

Registry entries file containing the entries needed in the Registry for the installation of the XNET Interface on Windows Server 2003

ETS_SERVICE64_XNET.REG

Registry entries file containing the entries needed in the Registry for the installation of the XNET Interface on Windows Server 2008 R2 systems

2.1.4 DSS Interface Installation Kit Part

The contents of DSS Interface Installation Kit part are the following:



INSTALL_DSS.BAT

Script for the semi-automated installation of the DSS interface

UNINSTALL_DSS.BAT

Script for the semi-automated de-installation of the DSS interface

ETS_SERVICE_DSS.REG

Registry entries file containing the entries needed in the Registry for the installation of the DSS Interface on Windows Server 2003

ETS_SERVICE64_DSS.REG

Registry entries file containing the entries needed in the Registry for the installation of the DSS Interface on Windows Server 2008 R2 systems



3 Installation instructions

First, the installation and parameterization of the Operating System of this server must have been completed successfully following the instructions described in the document “ATHEX Gateway Server: Systems and Network Preparation Instructions”

For the installation of the ATHEX Gateway application in the Windows system, the following steps are required:

- Log on to the Windows Server (2003 or 2008 R2) system using the domain administrator account.
- Extract in a temporary directory the **Installation Kit**'s contents.
- Open a command prompt. On **Windows Server 2008 R2** right-click on the **Command Prompt** icon and select **Run as administrator**.
- Go to the directory where the **Installation Kit**'s contents have been extracted.
- Enter the command: **install**
- Monitor the progress of the installation script from the **Command Prompt**.

The installation procedure can be split into five parts:

- 1) ODL Gateway service (ETS_Service.exe). Described in section 3.1.
- 2) ASE Service (ASE_Service.exe). Described in section 3.2.
- 3) XNET (optional). Described in section 3.3.
- 4) DSS (optional). Described in section 3.4.
- 5) DCOM configuration. (DCOMcnfg.exe). Described in section 3.5.

Additional security configuration steps can be found in sections 3.6 and 3.7. These steps are to confirm that the installation has successfully configured the security permissions of the **ATHEX registry key** and the log on identities of the **ATHEX Gateway Services**. After the installation has finished, you should go through these sections.

Note that all services will be installed under the **C:\ATHEX** directory.

3.1 ODL Gateway service (ETS_Service.exe) installation

This module is installed by the install_ODL.bat script that is called by the main installation script (install.bat).

The install_ODL.bat script follows the steps bellow:

- 1) Creates the directory C:\ATHEX\ODLSERVER, copies files, installs the **ODL Gateway** service (ETS_Service.exe) and registers the necessary libraries.
- 2) Prompts for the domain name of the **ETS_Service** account and the account password in order to automatically configure the account under which the service will log on. If you wish you can skip this part and follow the instructions from section 3.7.
- 3) Opens the **ETS_Service.reg**, in the notepad, where the appropriate adjustments shall be done under the following registry keys:



- a) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ETS_Service** for 32bit Windows Server versions
 or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ETS_Service for 64bit Windows Server versions

Depending on ODL Server's type (Production or Shadow) and operating mode (Primary or Backup), the following adjustments shall be applied:

Registry Parameter	Production Primary	Production Backup	Shadow Primary	Shadow Backup
FirmID	FIRM Id pro ⁽¹⁾	FIRM Id pro ⁽¹⁾	FIRM Id ⁽¹⁾	FIRM Id ⁽¹⁾
LogDirectory	An existing directory path for storing the files produced by the ODL Service each trading day must be specified			
Serial	0 - the serial output shall not be activated or 1 - the serial output shall be activated			
AdminGroup	ETS_Admins[<ComputerName>] ⁽²⁾			
BrokerGroup	ETS_Brokers[<ComputerName>] ⁽²⁾			
ValidClients	List of valid ODL Clients that can be connected to the ODL Service ⁽³⁾			
BackupServerMode	0 or 1 ⁽⁴⁾	2	0 or 1 ⁽⁴⁾	2
BackupClientAddress	Prod. Backup Intranet IP Addr.	Intranet Local IP Addr.	Shadow Backup Intranet IP Addr.	Intranet Local IP Addr.
BackupServerAddress	Intranet Local IP Addr.	Prod. Primary Intranet IP Addr.	Intranet Local IP Addr.	Shadow Primary Intranet IP Addr.
ServerID	Group No pro	Group No pro	Group No	Group No
TraceLogFilePath	An existing directory path for storing the trace log files produced by the ODL Service each trading day must be specified			
TraceLogMemoryFlag	0 or 1 ⁽⁵⁾	0 or 1	0 or 1	0 or 1
TraceSeverityLevel	1 - 5 ⁽⁶⁾	1 - 5	1 - 5	1 - 5

(1) The **FirmID** value is provided in decimal format and must be converted in hexadecimal format!!!

(2) The computer name of the GATEWAY inside the brackets must be completed using capital letters!!!

(3) **ValidClients** field is of the following format

<ComputerName_1>:<UserID_1>;<ComputerName_2>:<UserID_2>; ...;<ComputerName_n>:<UserID_n>

where:

- <ComputerName_i>: the computer name of the valid ODL Client in capital letters
- <UserID_i>: a printable character except for the characters '0' (zero), ' ' (space), ':' and ';', unique for each ODL Client



ATTENTION 1: If ASE Service is active for FIX protocol interface, a valid client must be declared here for every active ASE Service's scheduler. The computer name that should be used for these clients is <ATHEX Gateway Computer Name>_<Scheduler Name>.

ATTENTION 2: In a multiple (either concurrent or primary-backup) gateway scheme, valid clients must:

- Be declared in the same order on both Gateways.
- Have identical UserIDs
- Name fix schedulers with the corresponding gateway's Computer name

Example: 2 concurrent or primary backup gateways, ATHEGW1 and ATHEGW2, with 3 ODL Clients, ODLCL1 - ODLCL2 - ODLCL3, and 2 FIX Schedulers enabled each, FIX_SERVER1 and FIX_SERVER2 shall have in ValidClients the bellow configuration (Clients' order and UserIDs are indicative)

On ATHEGW1

ValidClients: ODLCL1:1; ATHEGW1 FIX_SERVER1:2; ODLCL2:3; ATHEGW1 FIX_SERVER2:4; ODLCL2:5

On ATHEGW2

ValidClients: ODLCL1:1; ATHEGW2 FIX_SERVER1:2; ODLCL2:3; ATHEGW2 FIX_SERVER2:4; ODLCL2:5

(4) BackupServerMode shall be set according to the operating mode of the Primary ODL Service, it shall take one of the following values

- **0**, if this ODL Service operates as primary – standalone without backup or one of a concurrent gateway scheme.
- **1**, if this ODL Service operates as primary with backup capability

BackupServerMode's value determines the operating mode on all (CTCI XNET and DSS) active interfaces.

- b) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ETS_Service\CTCI** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ETS_Service\CTCI for 64bit Windows Server versions

(5) TraceLogMemoryFlag shall be set one of the following values:

- **0**, if no trace information is needed. Set it to this value if the GW machine has memory limitations (less than 8GB).



- **1**, if tracing information should be logged to the file specified by **TraceLogFilePath**. This is the suggested value for GW machine with 8GB memory or more. Unlike the **DbgLogToFile** setting, found in previous versions of ATHEX GW, enabling the trace log file will **not** lead to any performance degradation. In the contrary, it will allow for easier troubleshooting and support.

(6) **TraceSeverityLevel** shall be set to indicate the level of detail in the trace logs produced if **TraceLogMemoryFlag** is set to **1**.

The available levels are:

Level	Description
1 (default)	Debug
2	Trace
3	Warning
4	Error
5	Fatal

Note: The higher the level of detail, more information will be logged. As previously mentioned the new logging mechanism will not lead to performance degradation. Level 1 (Debug) is the default and recommended value for this field.

Note: Members requiring exclusive access to the DSS interface must skip this step and proceed directly to step 4).

Depending on ODL Server's type (Production or Shadow) and operating mode (Primary or Backup), the following adjustments shall be applied:

Registry Parameter	Production Primary	Production Backup	Shadow Primary	Shadow Backup
Active	1	1	1	1
RemoteHostName	PCOM-Cluster	PCOM-Cluster	DCOM2	DCOM2
RemoteIPAddress	10.200.121.19	10.200.121.19	10.200.121.34	10.200.121.34
LocalDataPortNumber	<u>LocalDataPortNumber pro</u>	<u>LocalDataPortNumber pro</u>	<u>LocalDataPortNumber</u>	<u>LocalDataPortNumber</u>
RemoteControlPortNumber	<u>RemoteControlPortNumber pro</u>	<u>RemoteControlPortNumber pro</u>	<u>RemoteControlPortNumber</u>	<u>RemoteControlPortNumber</u>
LocalIPAddress	<u>ETSGW ASE IP</u>	<u>ETSGW ASE IP</u>	<u>ETSSGW ASE IP</u>	<u>ETSSGW ASE IP</u>
LocalControlPortNumber	<u>LocalControlPortNumber pro</u>	<u>LocalControlPortNumber pro</u>	<u>LocalControlPortNumber</u>	<u>LocalControlPortNumber</u>
CommsLoginPassword	<u>CommsLoginPassword pro</u>	<u>CommsLoginPassword pro</u>	<u>CommsLoginPassword</u>	<u>CommsLoginPassword</u>



-
- 4) The user must save the opened file and close notepad for the installation to continue.
 - 5) Updates the Windows Registry with the settings from the previous step.



3.2 ASE service (ASE_Service.exe) installation

This module is installed by the install_ASE.bat script that is called by the main installation script (install.bat).

Note: You can skip this section if you do not intend to use the FIX protocol.

The Install_ASE.bat script follows the steps below:

- 1) Creates the directory C:\ATHEX\ASE_SERVICE, copies files, installs the **ASE** service (ASE_Service.exe) and registers the necessary libraries.
- 2) Prompts for the password of the **ASE_Service** account in order to automatically configure the account under which the service will log on. If you wish you can skip this part and follow the instructions from section 3.7.2.
- 3) Opens the **ASE_Service.reg**, in the notepad, where the appropriate adjustments shall be done under the following registry keys:

Note:<x> denotes the number of the ASE Service scheduler.

- a) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x> for 64bit Windows Server versions

“Active”: 0 for Inactive, 1 for Active*.

(*) For connecting a new FIX Client on ATHEX Gateway a new Scheduler must be activated or added in **ASE_Service**'s registry. By default ASE_service.reg includes one scheduler. For more FIX Clients connections a new scheduler must be added. This procedure is described in a more detailed way under paragraph 3.11: Adding a new ASE Service scheduler.

- b) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>\Listeners\FIX_Listener** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>\Listeners\FIX_Listener for 64bit Windows Server versions

"ThisAddress": ATHEX Gateway's Intranet (Member's network) Local IP

"ClientAddress": FIX Client's IP address. If value is set to '*' the any IP address can connect to the specific Scheduler through FIX protocol.

"CompID": FIX protocol Remote Company ID

"ThisPort": Local listening Port Number.

- c) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>\Protocols\ODL5 Protocol** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>\Protocols\ODL5 Protocol for 64bit Windows Server versions

"ExportCX": 1 for forwarding ODL broadcast messages to FIX Client, or 0 (zero) otherwise

"ExportedCX": Broadcast ODL (CA, CC, CF...) messages' types to be forwarded

Format:<MessageType1>,<MessageType2>,<.....>,<MessageTypen>



ATTENTION: For valid broadcast ODL messages' types, please refer to the document "ATHEX Gateway: Architecture and Application Development Guidelines"

"DefaultValues": Specifies default values for declared FIX tags. The declared tags in this field may then be omitted from messages.

Format: <Tag1>=<Value1>|<Tag2>=<Value2>|.....|<Tagn>=<Valuen>

Note, that the '|' separator needs to be used at the end of any number of arguments.

ATTENTION: For valid FIX tags, please refer to the document "ATHEX Gateway: Architecture and Application Development Guidelines"

"Summertime": Should be set to 1 if the ATHEX Gateway resides in a country practicing Daylight Saving Time (DST) and set to 0 if not.

"Use94RejectOnMD": Should be set to 1 if an Order Cancel Reject message shall be returned in case that an Order Cancel/Replace Request message is rejected. Should be set to 0 in case that an Execution Report message shall be returned to denote the rejection. Default value is 1.

- d) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>\Trader** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ASE_Service\Schedulers\FIX_SERVER<x>\Trader for 64bit Windows Server versions

"CompID": FIX protocol Local Company ID

"RemoteCompID": FIX protocol Remote Company ID

ATTENTION: CompID and RemoteCompID must be different.

"LogDirectory": A directory path for storing the files produced by the ASE Service each trading day. Please make sure that the ASE_Service local account has full control access on this directory path.

"UseAdmin": 1 for connecting scheduler to ODL gateway on admin interface, otherwise 0. If multiple schedulers are defined only one can connect to ODL gateway.

"MaxODL5DisconnectionTime": this is the maximum time in milliseconds that will elapse after the ATHEX Gateway Server has lost connection with the Comms Server and the moment that a logout message will be sent to connected FIX Clients informing them of this disconnection. Default value is 10000 milliseconds. If set to 0, no Logout message will be sent to FIX Clients, thus the FIX Clients will not disconnect from ATHEX Gateway Server even if the Gateway has lost connection with Comms Server.

"DefaultODL5ConnectionID": this field indicates the server (OASIS/ETS or XNET or DSS Server) that the specific FIX scheduler communicates with.

Valid values are:

- **"ETS":** indicates that the specific scheduler communicates with OASIS/ETS. This is the default value.
- **"ORA":** indicates that the specific scheduler communicates with the XNET Server.
- **"DSS":** indicates that the specific scheduler communicates with the DSS Server.

- 4) The user must save the opened file and close notepad for the installation to continue.
- 5) Updates the Windows Registry with the settings from the previous step.



3.3 XNET installation

This module is optionally installed by the INSTALL_XNET.bat script that is called by the main installation script (install.bat). You can skip this section if you do not intend to use the XNET interface. The INSTALL_XNET.bat script follows the steps below:

- 1) Copies files and registers the necessary libraries.
- 2) Opens the **ETS_service.reg**, in the notepad, where the appropriate adjustments shall be done under the following registry keys.
 - a) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ETS_Service\XNET** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ETS_Service\XNET for 64bit Windows Server versions

Depending on ODL Server's type (Production or Shadow) and operating mode (Primary or Backup), the following adjustments shall be applied:

Registry Parameter	Production Primary	Production Backup	Shadow Primary	Shadow Backup
ORA_Active	0 - the interface to XNET shall not be activated or 1 - the interface to XNET shall be activated			
OracleTNS	XNET	XNET	XNET_TEST	XNET_TEST
OracleUser	<u>OracleUserName_pro</u>	<u>OracleUserName_pro</u>	<u>OracleUserName</u>	<u>OracleUserName</u>
OraclePswrd	<u>OraclePassword_pro</u>	<u>OraclePassword_pro</u>	<u>OraclePassword</u>	<u>OraclePassword</u>
OraclePrefix	ODL_CTCL.rc_	ODL_CTCL.rc_	ODL_CTCL.rc_	ODL_CTCL.rc_

- 3) The user must save the opened file and close notepad for the installation to continue.
- 4) Updates the Windows Registry with the settings from the previous step.
- 5) Follow the instructions described in the document "ATHEX Gateway Server: TNS Preparation Guide for XNET and DSS interfaces". Note that the OracleTNS field, described in the previous table, should be the same with the appropriate entry name in the tnsnames.ora file.



3.4 DSS installation

This module is optionally installed by the INSTALL _DSS.bat script that is called by the main installation script (install.bat). You can skip this section if you do not intend to use the DSS interface. The INSTALL _DSS.bat script follows the steps below:

- 1) Copies files and registers the necessary libraries.
- 2) Opens the **ETS_service.reg**, in the notepad, where the appropriate adjustments shall be done under the following registry keys.
 - b) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ETS_Service\DSS** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ETS_Service
DSS for 64bit Windows Server versions

Depending on ODL Server's type (Production or Shadow) and operating mode (Primary or Backup), the following adjustments shall be applied:

Registry Parameter	Production Primary	Production Backup	Shadow Primary	Shadow Backup
ORA_Active	0 - the interface to DSS shall not be activated or 1 - the interface to DSS shall be activated			
OracleTNS	DSS	DSS	DSS_TEST	DSS_TEST
OracleUser	<u>OracleUserName_pro</u>	<u>OracleUserName_pro</u>	<u>OracleUserName</u>	<u>OracleUserName</u>
OraclePswrd	<u>OraclePassword_pro</u>	<u>OraclePassword_pro</u>	<u>OraclePassword</u>	<u>OraclePassword</u>
OraclePrefix	ODL_CTCL.rc_	ODL_CTCL.rc_	ODL_CTCL.rc_	ODL_CTCL.rc_

- 3) The user must save the opened file and close notepad for the installation to continue.
- 4) Updates the Windows Registry with the settings from the previous step.
- 5) Follow the instructions described in the document "ATHEX Gateway Server: TNS Preparation Guide for XNET and DSS interfaces". Note that the OracleTNS field, described in the previous table, should be the same with the appropriate entry name in the tnsnames.ora file.



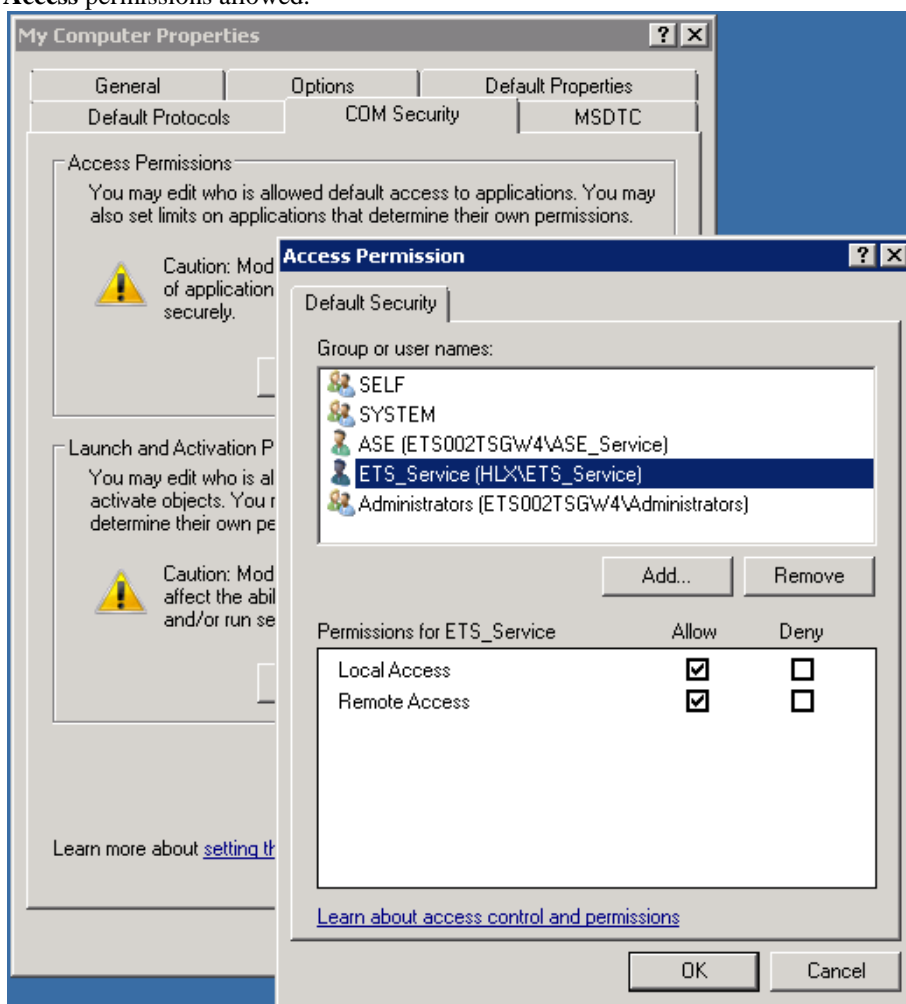
3.5 DCOM configuration

The **Component Services** console (Dcomcnfg.exe) is automatically opened by the install.bat script. You can also open this console from the **Administrative Tools**.

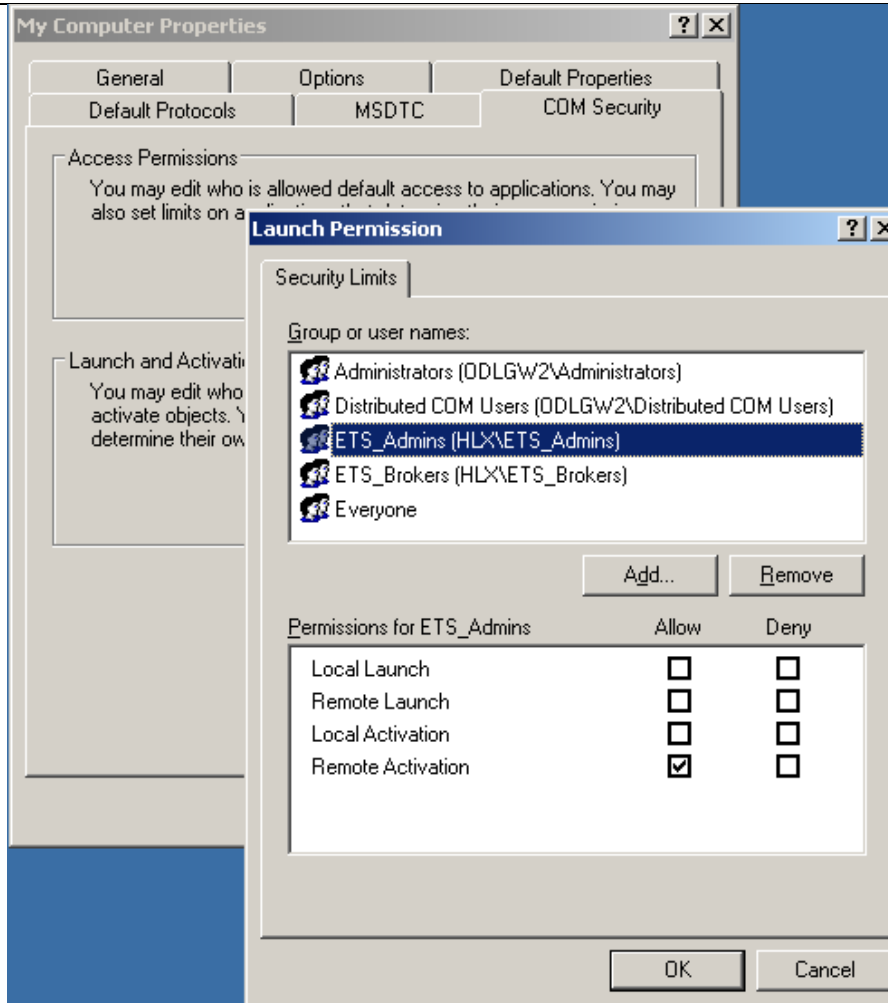
The following steps must be taken:

3.5.1 MyComputer

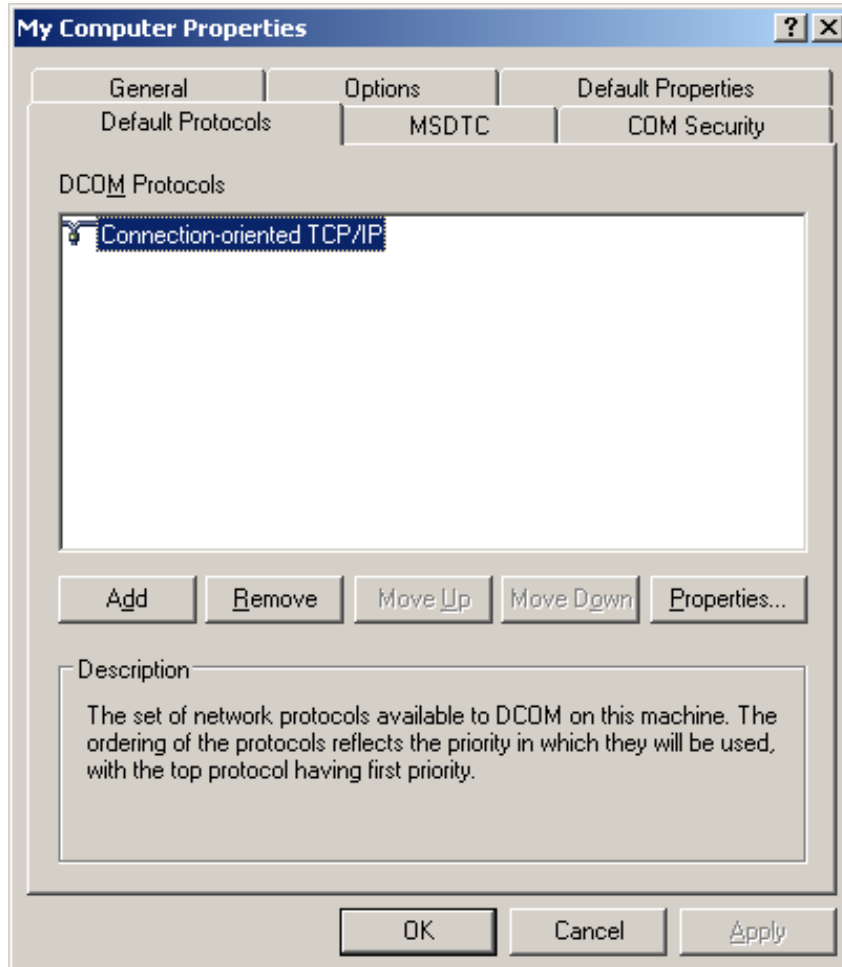
- In the console tree click **Console Root**, then click **Component Services**, then click **Computers**.
- Right-Click - **My Computer** and select **Properties**.
- In the **COM Security** tab, in the **Access Permissions** section select **Edit Default**. The **Access Permission** window will open.
- In the **Default Security** add the **ETS_Service** user with both **Local Access** and **Remote Access** permissions allowed.



- In the **COM Security** tab, in the **Launch and Activation Permissions** section select **Edit Limits**. The **Launch and Activation Permission** window will open.
- In the **Security Limits** add the local groups **ETS_Admins** and **ETS_Brokers** with only the **Remote Activation** permission allowed.

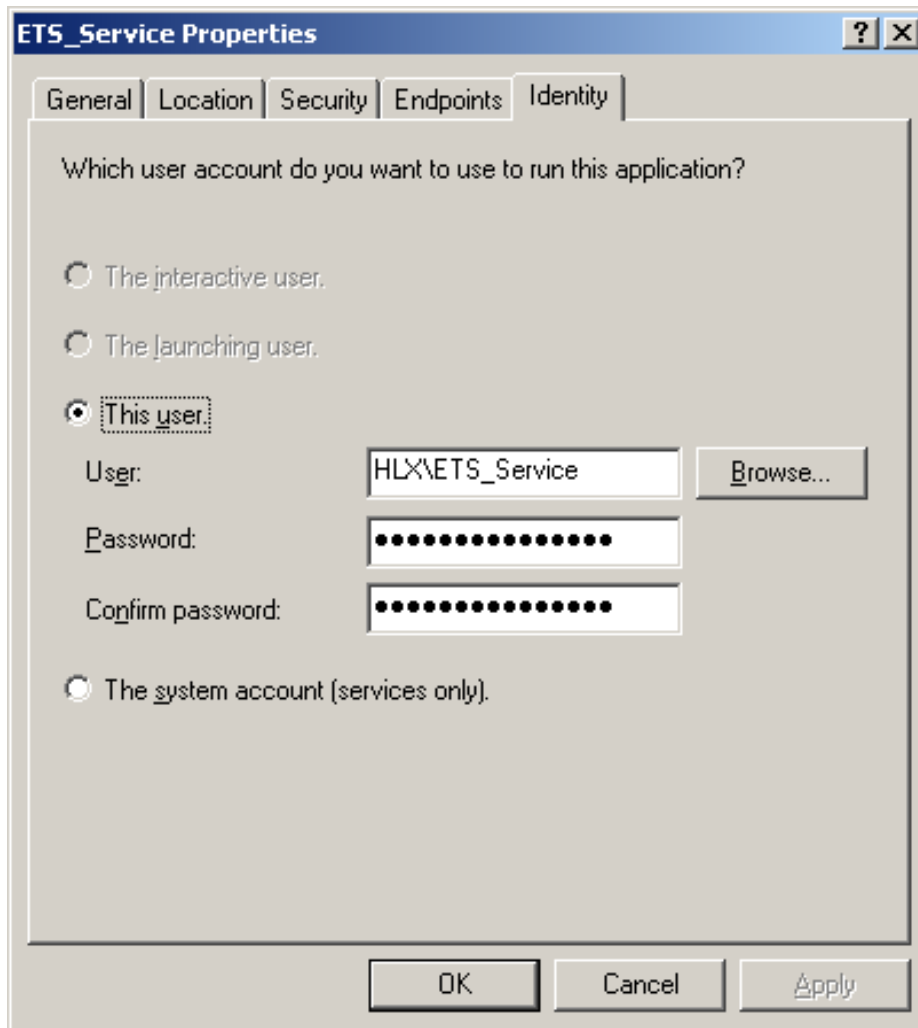


- In the **Default Protocols** tab, confirm that the **TCP/IP** protocol is the first in the list of protocols.



3.5.2 ETS_Service

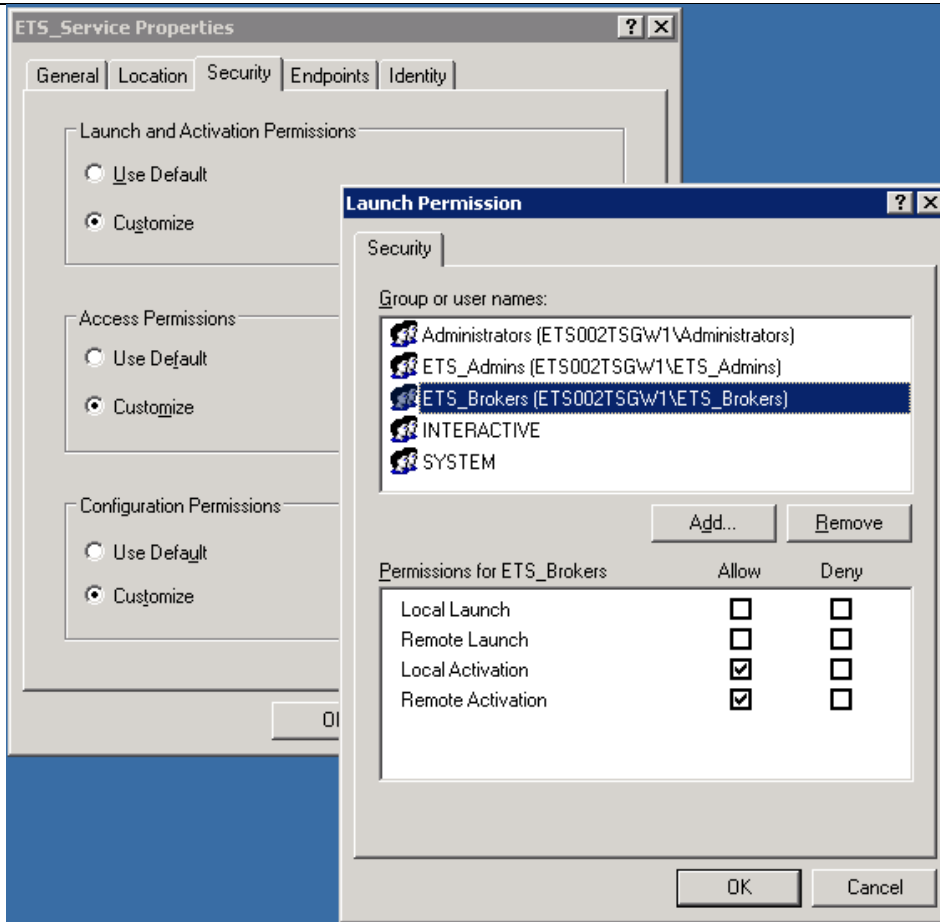
- In the console tree click **Console Root**, then click **Component Services**, then click **Computers**, then click **MyComputer**, then click **DCOM Config**.
- In the application list right-click **ETS_Service** and select **Properties**.
- Select the **Identity** tab.
- Choose **This user** and enter the **ETS_Service** account credentials.



- Select the **Security** tab.

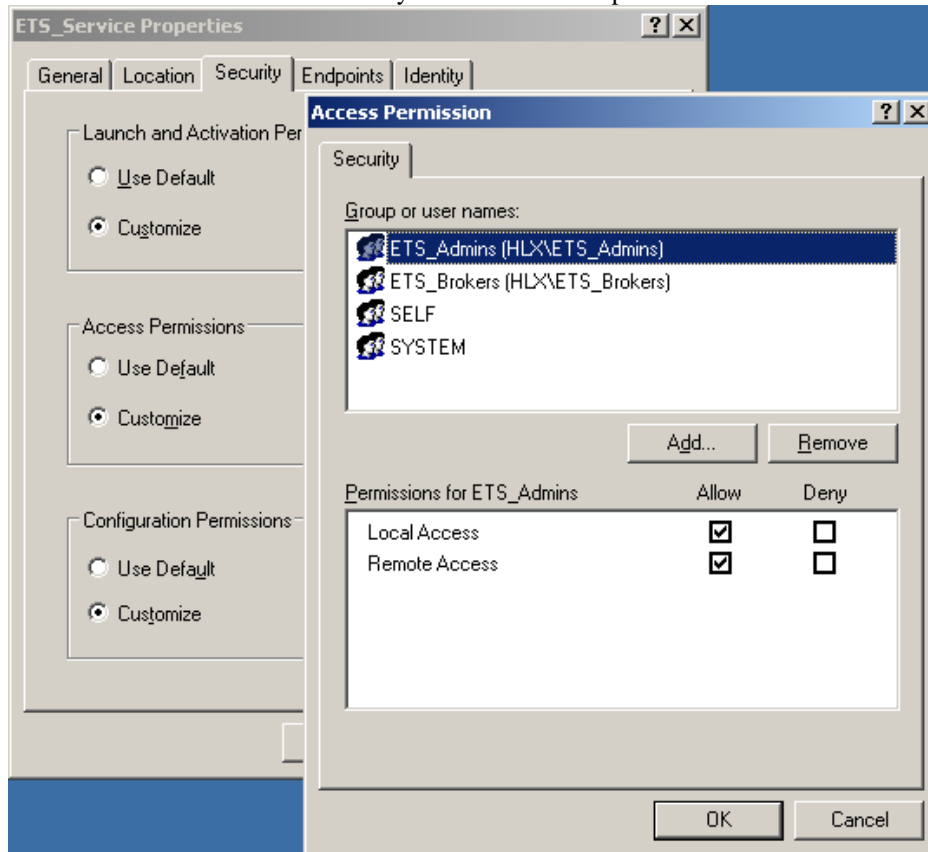
3.5.2.1 Launch and Activation Permissions

- In the **Launch and Activation Permissions** section click **Customize** and choose **Edit**. The **Launch and Activation Permission** window will open.
- Add the local groups **ETS_Brokers**, **ETS_Admins** with the **Local Activation** and **Remote Activation** permissions allowed.
- Make sure the **SYSTEM** user and the local **Administrators** group have all four permissions (**Local Launch**, **Remote Launch**, **Local Activation** and **Remote Activation**) allowed.



3.5.2.2 Access Permissions

- In the **Access Permissions** section click **Customize** and choose **Edit**. The **Access Permission** window will open.
- Add the local groups **ETS_Brokers**, **ETS_Admins** with the **Local Access** and **Remote Access** permissions selected.
- Make sure the **SYSTEM** user has only **the Local Access** permission allowed.



3.6 ATHEX Registry key

In order for the ATHEX Gateway services to properly function, full control permission must be granted on the ATHEX registry key to the users that run the **ODL Gateway** and **ASE_Service** services. Without this permission the services will not be able to start.

- Click on **Start**, and select **Run...**
- Type **regedit** and press enter.
- In Windows Server 2008 R2 a UAC confirmation message might appear. Click Yes.
- The **Registry Editor** will open.
- Navigate to **ATHEX** registry key.
 - **HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX** for Windows Server 2008R2.
 - **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX** for Windows Server 2003.
- Right-click on the **ATHEX** key and select **Permissions**. The **Permissions for ATHEX** window will open.

3.6.1 ODL Gateway service

- Add the **ETS_Service** user and allow the **Full Control** permission.

3.6.2 ASE Service

Note: You can skip this section if you do not intend to use the FIX protocol.

- Add the **ASE_Service** user and allow the **Full Control** permission.
- Navigate to the **HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\EVENTLOG\APPLICATION** registry key.
- Right-click on the **APPLICATION** key and select **Permissions**. The **Permissions for APPLICATION** window will open.
- Add the **ASE_Service** user and allow the **Full Control** permission.

3.7 ATHEX Gateway Services Log On configuration

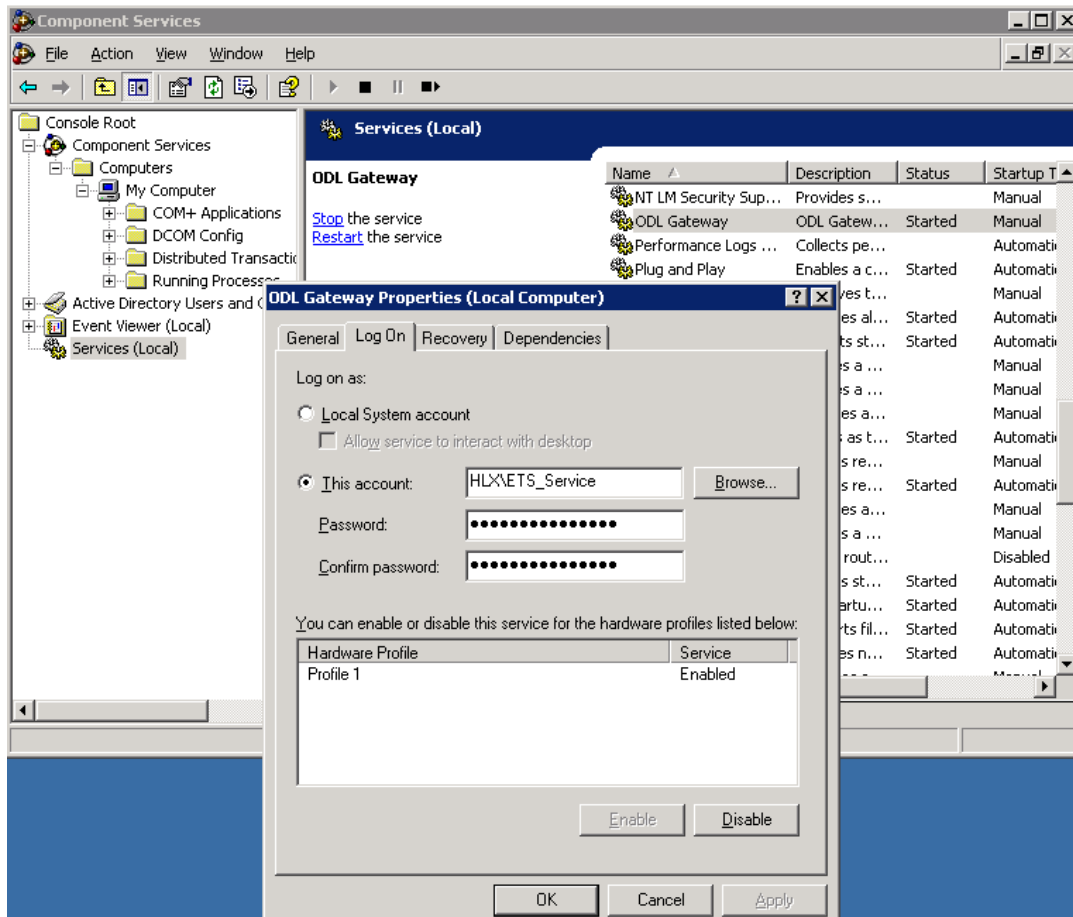
In order for the ATHEX Gateway services to properly function, they should be running under specific user accounts. Without this configuration the services will not be able to properly communicate with each other and with the client applications.

- Click on **Start, Administrative Tools** and select **Services**. The **Services** window will open.

3.7.1 ODL Gateway service

You can skip this part if you do not intend to use the FIX protocol.

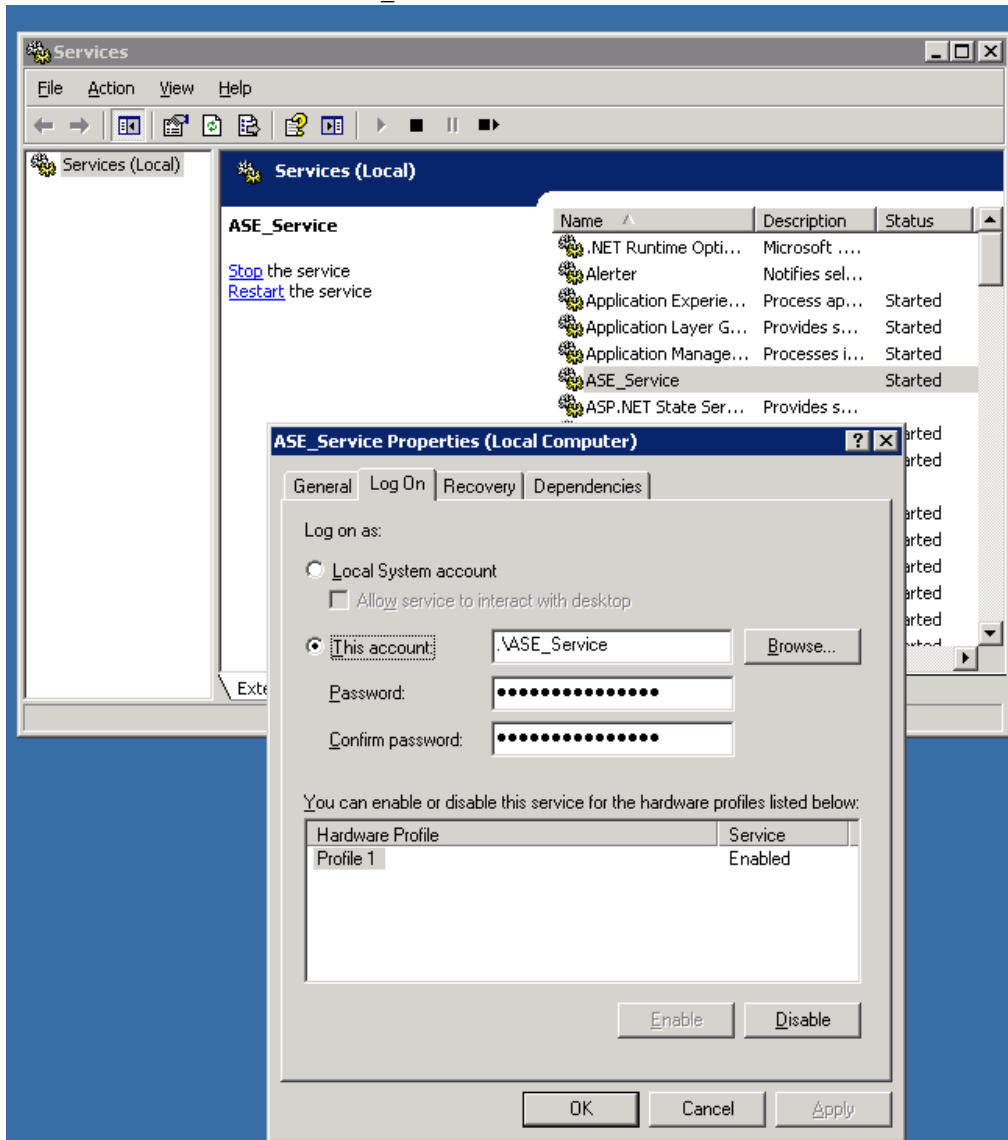
- Select the **ODL Gateway** service and make sure it is stopped.
- Right-click on the service and select **Properties**. The **ODL Gateway Properties** windows will open.
- In the **Log On** tab, select **This account**.
- Enter the credentials of the **ETS_Service** user account.



3.7.2 ASE Service

Note: You can skip this section if you do not intend to use the FIX protocol.

- Select the **ASE_Service** service and make sure it is stopped.
- Right-click on the service and select **Properties**. The **ASE_Service Properties** windows will open.
- In the **Log On** tab, select **This account**.
- Enter the credentials of the **ASE_Service** user account.



3.8 ATHEX Gateway schedule

The ATHEX Gateway Services should never be left running for more than a day. Instead they should be configured to start and stop at specific times¹, every day from Monday to Friday. The procedure is the following:

- Open a command prompt. On **Windows Server 2008 R2** right-click on the **Command Prompt** icon and select **Run as administrator**.

- Add start schedules:

For **Production ATHEX Gateways** enter the command:

➤ at 08:15 /every:m,t,w,th,f net start "ets_service"

If the FIX protocol interface is used, enter the command:

➤ at 08:17 /every:m,t,w,th,f net start "ase_service"

For **Shadow ATHEX Gateways** enter the command:

➤ at 10:30 /every:m,t,w,th,f net start "ets_service"

If the FIX protocol interface is used, enter the command:

➤ at 10:32 /every:m,t,w,th,f net start "ase_service"

- Add stop schedules:

For **Primary ATHEX Gateways** enter the commands:

➤ at 23:30 /every:m,t,w,th,f net stop "ets_service"

➤ at 23:32 /every:m,t,w,th,f kill ets_service

If the FIX protocol interface is used, enter the commands:

➤ at 23:26 /every:m,t,w,th,f net stop "ase_service"

➤ at 23:28 /every:m,t,w,th,f kill ase_service

- For producing the **ODL Gateway** service statistics **specifically in Production ATHEX Gateways**, enter the commands:

➤ at 23:34 /every:m,t,w,th,f

C:\ATHEX\ODLSERVER\create_statistics.exe AOM_Id

- For the confirmation of the commands above:

➤ at

- For the deletion of the above jobs:

➤ at/delete

An example is given bellow:

¹ ETS_Service's start and stop time depends on ATHEX markets schedule and must be modified in accordance with related ATHEX announcements

```

C:\WINDOWS\system32\cmd.exe
D:\>at 09:25 /every:m,t,w,th,f net start "ets_service"
Added a new job with job ID = 1
D:\>at 09:25 /every:m,t,w,th,f net start "ase_service"
Added a new job with job ID = 2
D:\>at 20:56 /every:m,t,w,th,f net stop "ase_service"
Added a new job with job ID = 3
D:\>at 20:58 /every:m,t,w,th,f kill ase_service
Added a new job with job ID = 4
D:\>at 21:00 /every:m,t,w,th,f net stop "ets_service"
Added a new job with job ID = 5
D:\>at 21:02 /every:m,t,w,th,f kill ets_service
Added a new job with job ID = 6
D:\>at
Status ID Day Time Command Line
-----
1 Each M T W Th F 9:25 AM net start ets_service
2 Each M T W Th F 9:25 AM net start ase_service
3 Each M T W Th F 8:56 PM net stop ase_service
4 Each M T W Th F 8:58 PM kill ase_service
5 Each M T W Th F 9:00 PM net stop ets_service
6 Each M T W Th F 9:02 PM kill ets_service
D:\>_
    
```

3.9 File management of the ATHEX Gateway

Every trading day the following files are produced in the **ATHEX Gateway**:

- 1) The **ODL log file** named ODL_YYYYMMDD.log, where YYYY is the year, MM is the month (01-12) and DD is the day (01-31) of the current date.
- 2) One **log file per ASE Service's active scheduler** named <Scheduler_name>_YYYYMMDD.log, where YYYY is the year, MM is the month (01-12) and DD is the day (01-31) of the current date.
- 3) The **DSS log file** named DSS_YYYYMMDD.log, where YYYY is the year, MM is the month (01-12) and DD is the day (01-31) of the current date.

These files are stored in the directories specified (during ATHEX Gateway's installation) in the registry fields, as it is denoted in sections 3.1 and 3.2.

The Member is responsible for the correct backup and/or restore of these files.

3.10 Testing ODL Connectivity

At the end of installation procedure, as it is described in previous sections, technical staff responsible for installation must test the correct operation of ODL Service and connectivity to ATHEX trading system. Testing procedure consists of the following steps:

- 1) At the end of trading day (~17:30) stop the **ODL Gateway** service (ETS_Service.exe) on ATHEX Gateway to be replaced.
- 2) Start the **ODL Gateway** service (ETS_Service.exe) on new ATHEX Gateway.
- 3) Contact **Member Support Department** to check that ATHEX Gateway is connected to central trading system.

- 4) Register a production **ODL Client** to ATHEX Gateway through ODL interface both as **Broker** and **Admin** and get lost messages. Verify that messages are received from the **ODL Client**.
- 5) Stop the **ODL Gateway** service (ETS_Service.exe).

3.11 Adding a new ASE Service scheduler

For the addition of a new **ASE Service** scheduler the following steps shall be executed:

- 1) Open C:\ATHEX\ASE_Service\ASE_Scheduler.reg with a text editor.
- 2) Replace <x> at the end of FIX_Server<x> in any appearance with the next available number of the schedulers already registered in **ASE_Service**'s registry path.
- 3) Apply the adjustments described in step 3) of section 3.2.
- 4) Save changes and close the text editor.
- 5) On a **Command Prompt** type: **regedit C:\ATHEX\ASE_Service\ASE_Scheduler.reg**

The addition of the new Scheduler is completed and will be available at next start of **ASE_Service**.

3.12 De-installation instructions of the ATHEX Gateway services

For the de-installation of the ATHEX Gateway application, the following steps shall be executed:

- Log on to the Windows Server (2003 or 2008 R2) system using the domain administrator account.
- Open a command prompt. On **Windows Server 2008 R2** right-click on the **Command Prompt** icon and select **Run as administrator**.
- Enter the command: C:\ATHEX\uninstall
- Monitor the progress of the installation script from the **Command Prompt**. Note that the script will prompt for the removal of the **ATHEX registry key**. If you do not want to lose the configuration made in **sections 3.1, 3.2 and 3.3** choose to keep the registry key.

Note: In case that the message «Uninstall procedure failed...» is displayed, call ATHEX for technical support (information on the relevant contact point is given in **chapter 5**).

Finally, for the completion of the de-installation and after the successful completion of the above steps, the opposite actions are required for the DCOM adjustment performed in **section 3.5**. These actions are not performed automatically by the UNINSTALL Script.

4 ODL CLIENT API

This chapter describes the instructions for the installation and parameterization of the **ODL Client API** in the member's **ODL Client** system. These systems should be in the intranet of the member having the same Domain with the corresponding ODL Service.

Note: You can skip this section if you do not intend to use the FIX protocol.

ODL Client API's Installation Kit is available at oasis's home page:

<http://www.ase.gr/oasis/>

Necessary requirement for the installation of the **ODL Client API** application is the correct installation of the **ODL Gateway** application.

4.1 ODL Client API Installation Kit contents

The contents of the Installation Kit are:

ReadMe.txt

Short description of the Installation Kit contents and guidelines for installing / uninstalling the ODL Client API application

INSTALL.BAT

Script for installing the ODL Client API application

UNINSTALL.BAT

Script for uninstalling the ODL Client API application

ETS_Broker.dll

Libraries necessary for the ODL Client API application

ETS_Broker.reg

Registry file with all the necessary fields for correct installation of the ODL Client API application.

ETS_Broker64.reg

Registry file with all the necessary fields for correct installation of the 32bit ODL Client API application in 64bit Architecture systems.

Samples

Directory with samples in VB and VC++, using the service through the ODL Client API application.

Samples\ETS_VBTest

Sample program "ETS_Test" written in VB.

4.2 Installation guidelines

The **ODL Client API** can be installed to any **Microsoft Windows** (XP or later) computer, which belongs to the same Domain as the **ATHEX Gateway**.

4.2.1 Installation script

To install the **ODL Client API** the following steps are necessary:

- 1) Log on to the Microsoft Windows (XP or later) system using the domain administrator account.
- 2) Extract in a temporary directory the **Installation Kit**'s contents.
- 3) Open a command prompt. On **Windows Vista or later** right-click on the **Command Prompt** icon and select **Run as administrator**.
- 4) Go to the directory where the **Installation Kit**'s contents have been extracted.
- 5) Enter the command: **install INSTALLATION_DIRECTORY**
(where **INSTALLATION_DIRECTORY** is the directory on which the **ODL Client API** will be installed. Note that the installation script will create the subdirectory ODLAPI where the actual installation will take place. e.g. **install c:**)
- 6) Monitor the progress of the installation script from the **Command Prompt**. The installation directory will be created, files will be copied and a library will be registered.
- 7) The **ETS_Broker.reg**, opens in the notepad, where the appropriate adjustments shall be done under the following registry keys:
 - a) **HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ETS_Broker** for 32bit Windows Server versions
or
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ATHEX\ETS_Broker for 64bit Windows Server versions

"ETS_Server"="XXX.XXX.XXX.XXX"
(Intranet IP address of the ATHEX Gateway)
"Timeout"=dword:00001388
(Waiting time out for completion of a call)

In the "ETS_Server" field it is necessary to enter the correct **IP address** or the name of the **ATHEX Gateway** machine through which the communication with OASIS/ETS will occur. After the change, a Save is required and then Exit from the Notepad application in order for the installation script to write the necessary information to the registry. MS Windows notifies user for the completion of this action by displaying an informational message.
 - b) The user must save the opened file and close notepad for the installation to continue.
- 8) Updates the Windows Registry with the settings from the previous step. The **registry editor** will prompt the user for confirmation. Click Yes.

4.2.2 DCOM configuration

The **Component Services** console (Dcomcnfg.exe) is automatically opened by the install.bat script. You can also open this console from the **Administrative Tools**.

The following steps must be taken:

- In the console tree click **Console Root**, then click **Component Services**, then click **Computers**.
- Right-Click - **My Computer** and select **Properties**.
- In the **COM Security** tab, in the **Access Permissions** section select **Edit Default**. The **Access Permission** window will open.
- In the **Default Security** add the **ETS_Service** user with both the **Local Access** and **Remote Access** permissions allowed.
- In the **COM Security** tab, in the **Access Permissions** section select **Edit Limits**. The **Access Permission** window will open
- Make sure **ANONYMOUS LOGON** has the Remote Access permission allowed.

Note: In case a warning message appears with the indication "ODL Client API: Installation failed ..." contact ATHEX for technical support (information for the relevant contact point is described at the end of **chapter 5** of this document).

4.3 De-installation guidelines

To uninstall the ODL Client API application in a MS Windows system the following steps are necessary:

- Log on to the Microsoft Windows (XP or later) system using the domain administrator account.
- Extract in a temporary directory the **Installation Kit**'s contents.
- Open a command prompt. On **Windows Vista or later** right-click on the **Command Prompt** icon and select **Run as administrator**.
- Enter the command: `INSTALLATION_DRIVE\ODLAPI\uninstall`
(where `INSTALLATION_DRIVE` is the drive on which the **ODL Client API** is installed e.g. `c:\ODLAPI\uninstall`)
- Monitor the progress of the installation script from the **Command Prompt**.

Note: In case a warning message appears with the indication "ODL Client API: Uninstall procedure failed ..." contact ATHEX S.A for technical support (information for the relevant contact point is described at the end of **chapter 5** of this document).

For the successful completion of uninstalling the ODL Client API application after the end of the uninstall script all the necessary changes on the DCOM setup must be performed in order the system to be as it was before the installation. These actions are not performed by the script and must be done manually.



5 Technical Support

It is recommended to follow the instructions presented in this document without deviations or changes. For any additional information concerning the instructions of the current document, please contact:

Members Support Department

Tel: (+30) 210 - 33.66.393

Tel: (+30) 210 - 33.66.385

Fax: (+30) 210 - 33.66.286

E-mail: Members-Support@helex.gr



6 APPENDIX A: Using ATHEX Gateway without a Domain Controller

It is possible to run the ATHEX Gateway without using a Domain Controller.

Briefly, as it is described in the document “Order Data Link (ODL) Gateway, Brief Installation Instructions”, **all user accounts** (ETS_service, ETS_Broker1, ..., ETS_Admin1, ...) **must be locally created both in the ATHEX Gateway and in the ODL Client(s)**. These local user accounts must be **identical** (username, password, access rights) in all machines.

Apart from this difference, all other steps of the installation and configuration of the ATHEX Gateway are the same with those described in **chapter 3**.

7 APPENDIX B: Multiple ETS_Service instances on one ATHEX Gateway

For the installation of multiple instances of **ODL Gateway** service (ETS_service.exe) on the same **ATHEX Gateway** system, the steps below must be followed:

- 1) A number of different **Installation Kits** must be provided by **ATHEX**, depending on the number of instances required to be installed on the **ATHEX Gateway**.
- 2) Instructions of Paragraph 3.1 must be repeated for all the instances of **ODL Gateway** service (ETS_service.exe), according to the different **INSTALLATION FORMs** provided by **ATHEX**. One **INSTALLATION FORM** will be available for every instance.

For every **ETS_Service** instance installed, a different **Registry Key** will be created under the registry path:

- **HKEY_LOCAL_MACHINE\SOFTWARE**
 \Wow6432Node\ATHEX\ETS_Service<instance_number> for Windows Server 2008 R2.
 HKEY_LOCAL_MACHINE\SOFTWARE\ATHEX\ETS_Service<instance_number> for Windows Server 2003

On each one of these keys, the parameterization of one of the **INSTALLATION FORMs** must be applied.

The value of **LogDirectory** parameter must be unique for each one of the instances installed on the **ATHEX Gateway** system.

Time scheduling for create_statistics.exe shall be omitted.