



ILLiad

International Conference

Don't Panic!

A Guide to Basic ILLiad Troubleshooting (2016)



Welcome:

“The major difference between a thing that might go wrong and a thing that cannot possibly go wrong is that when a thing that cannot possibly go wrong goes wrong it usually turns out to be impossible to get at and repair.”

– Douglas Adams

Introductions:

Kevin Ford

kford@atlas-sys.com

Kevin Ford graduated from Virginia Tech in 1988 with a Bachelor of Arts degree in History and a minor in Creative Writing.

Having procured such a useful and marketable degree, he then opted to work for the Virginia Tech University Libraries while putting himself through Graduate School.

He has worked in several different departments of the Library including Circulation, Reserve, and Interlibrary Loan, and he has served as President of the Virginia Tech Library Staff Association.

He graduated again in 1996 with a somewhat marginally more marketable Master of Arts degree in Education: Curriculum and Instruction, and a certification to teach History in the state of Virginia.

Needless to say, he continued working at the library a bit longer.

While serving as the Interlibrary Loan Borrowing Supervisor, Kevin participated in the initial development and implementation of the ILLiad software, which mostly involved flowcharting the perilously labyrinthine Borrowing workflow process prior to coding.

With that accomplished, and the initial ILLiad software successfully implemented, Kevin left ILL and ILLiad for a few years to teach History, until he realized that he couldn't really live on a teacher's salary in the state of Virginia.

He then returned to the ILLiad fold by joining Atlas Systems, Inc. as a software Installer and Trainer in 2000.

He's had a number of different positions and responsibilities at Atlas over the years, but currently, he's responsible for various database-related special projects of varying levels of difficulty.

Every once in a while, if he's good, they let him out of the office to teach an ILLiad Training class.



Introductions:

- Your Participation is both Welcome and Expected.
- Please feel free to ask questions any time during the session.
- Please speak up and tell us about your experiences and special projects!

Session Topics:

- **General Troubleshooting Tips**
- **SQL Connectivity Issues**
 - Client/Web Server to Database
- **Other Port/Network Connectivity Issues**
 - System Port Requirements
 - Odyssey/Rapid/System/ISO Manager Connectivity
- **SQL Errors**
 - Common Data Entry Pitfalls

Session Topics:

- **Logging**
 - Components
 - Windows
- **Web Page Issues**
 - PDF Access
 - Web Platform
- **File Access Problems**
- **Email Problems**
- **Group Exercises in Troubleshooting**



General Troubleshooting Tips:



General Troubleshooting Tips:



General Troubleshooting Tips:

“I see the solution to each problem as being detectable in the pattern and web of the whole. The connections between causes and effects are often much more subtle and complex than we with our rough and ready understanding of the physical world might naturally suppose.”

- Douglas Adams

General Troubleshooting Tips:

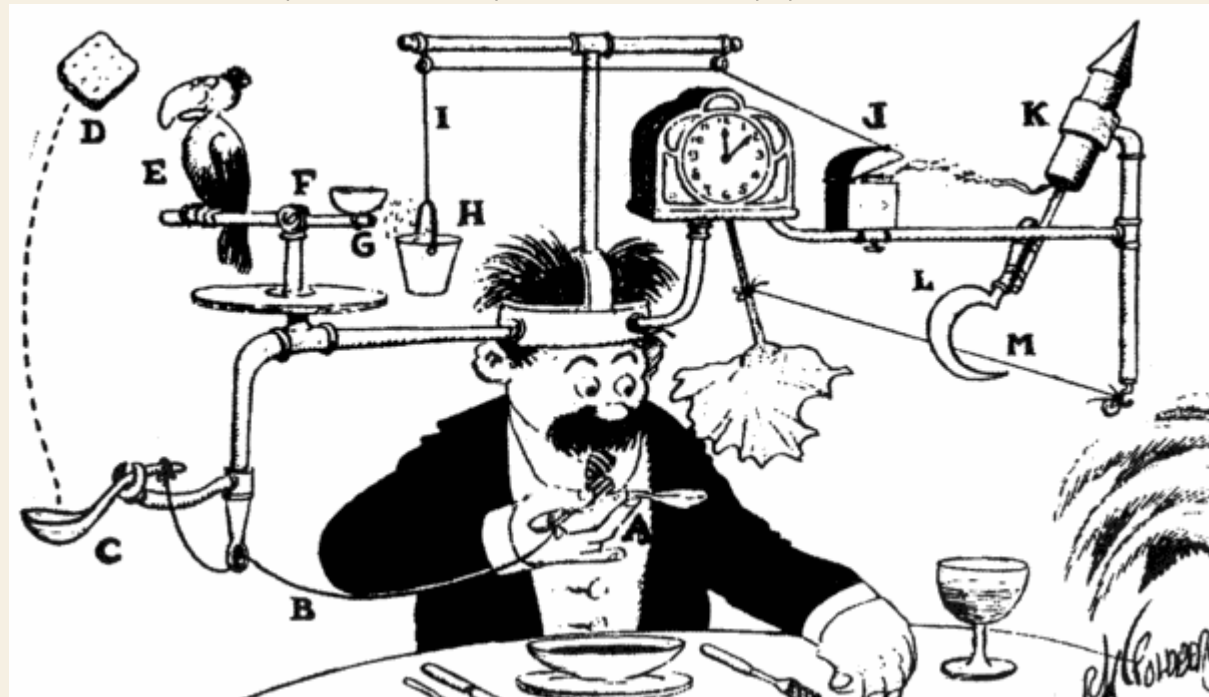
Before we start: A few things to keep in mind –

- A little **Common Sense** goes a long way.
 - Avoid snipe hunts.
- Use what **Knowledge** you already have about how the system works.
 - If the issue seems to be client/database connectivity, don't go poking around in IIS first.
- **Trust**, but **Verify**.
 - Trust that whoever is reporting an issue actually has an issue.
 - Verify that said issue is actually what they think it is (knowing that it sometimes/often won't be.)
- Be **Meticulous** and **Systematic** with your process (whatever that process may be).
 - A haphazard troubleshooting process leaves holes through which gremlins can escape.

General Troubleshooting Tips:

Before we start: A few things to keep in mind –

- Whenever possible, learn how things work.
 - If you know how it works, you often know how to break it (or you probably at least have a good idea or three).
 - If you know how to break it, you MIGHT just know how to fix it.
 - And even if you don't know how to fix the problem, you can likely point others in the right direction.



General Troubleshooting Tips:

Asking for Help: The most important things to learn in this class:

- Call or Email Support for help when you need it!
- You can **GREATLY** help support staff by providing:
 - Feedback Files
 - includes screen shot, ILLiad log, and system information
 - Exact error messages (screenshots are welcome)
 - Other ILLiad Logs (if applicable)
 - Specific Information about the problem:
 - Do you see any patterns?
 - One user affected? One Machine? All Users? All Machines? Etc.
 - Specific transaction number examples

General Troubleshooting Tips:

A Strategic (and Hopefully Reasonably Logical) Approach:

1. Identify:

The Problem

2. Evaluate:

The Evidence

3. Investigate:

Possible Cause(s)

4. Analyze:

Possible Solutions

5. Design:

A Possible Fix

6. Act:

Implement your Fix

Really Cool Acronym:

LIADA?

General Troubleshooting Tips:

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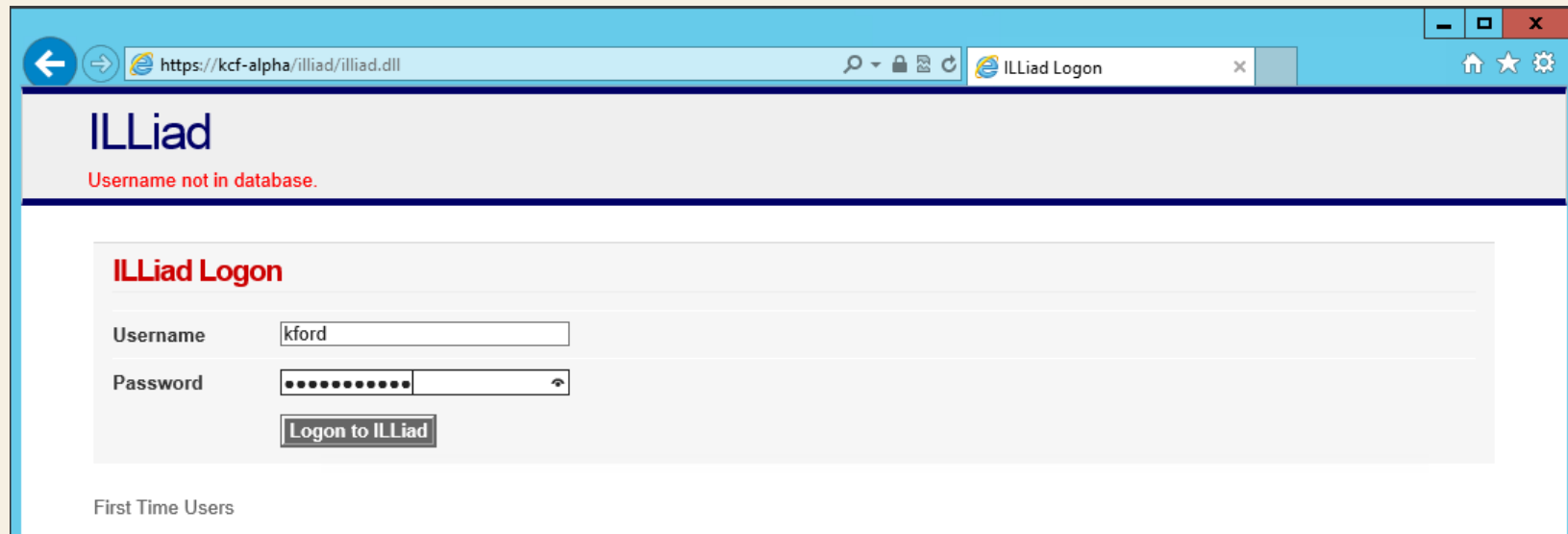
**“Let's think the unthinkable,
let's do the undoable. Let us
prepare to grapple with the
ineffable itself, and see if we
may not eff it after all.”**

— Douglas Adams

General Troubleshooting Tips:

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's going on that **SHOULDN'T**?
 - Examples:
 - The ILLiad web pages return an error indicating that users' Usernames are not in the database.
 - Every time I Open a request for processing in the client, I see an error message.
 - Odyssey Delivery from the Client machines to the ILLiad Server fails/errors out.
 - Etc.



General Troubleshooting Tips:

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's **NOT** going on that **SHOULD**?

- Examples:

- We haven't gotten any new OCLC requests from other libraries in a while.
- ISO ILL requests are not being received/sent.
- I can't get the ILLiad Client to see the database.
- My Routing Rule doesn't appear to be routing anything anywhere.
- Etc.

General Troubleshooting Tips:

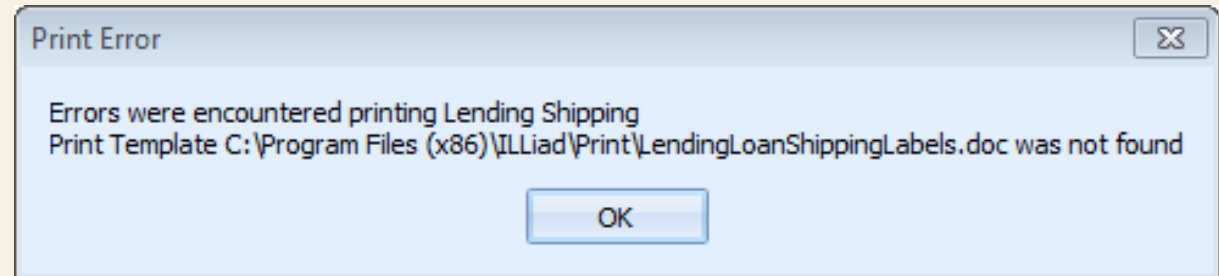
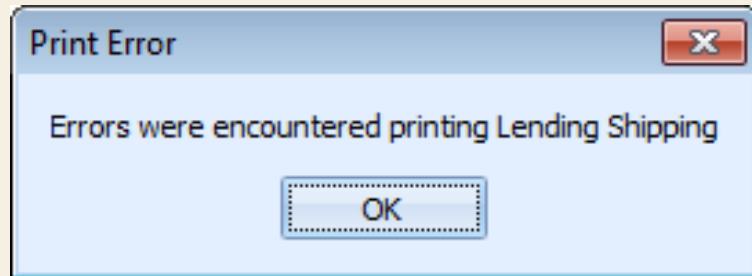
2. **Evaluate:** What evidence do you have for this behavior/misbehavior/failure?

- Anecdotal:
 - Discussion with Staff/Users/other Institutions (whoever sees an issue).
 - Note: Just because it's anecdotal, doesn't mean it isn't real. You may just need to investigate further.
 - On the other hand, sometimes it **ISN'T** real.
 - And that's **OK**. This is where training opportunities come from.
 - Be prepared for either.

General Troubleshooting Tips:

2. **Evaluate:** What evidence do you have for this behavior/misbehavior/failure?

- Error Messages
 - Pop-up Messages



General Troubleshooting Tips:

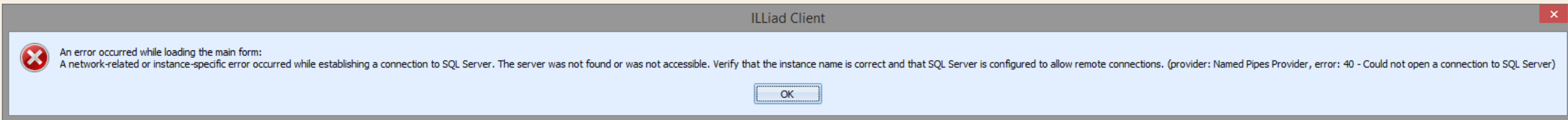
2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- Error Messages
 - Pop-up Messages

General Troubleshooting Tips:

2. **Evaluate:** What evidence do you have for this behavior/misbehavior/failure?

- Error Messages
 - Pop-up Messages



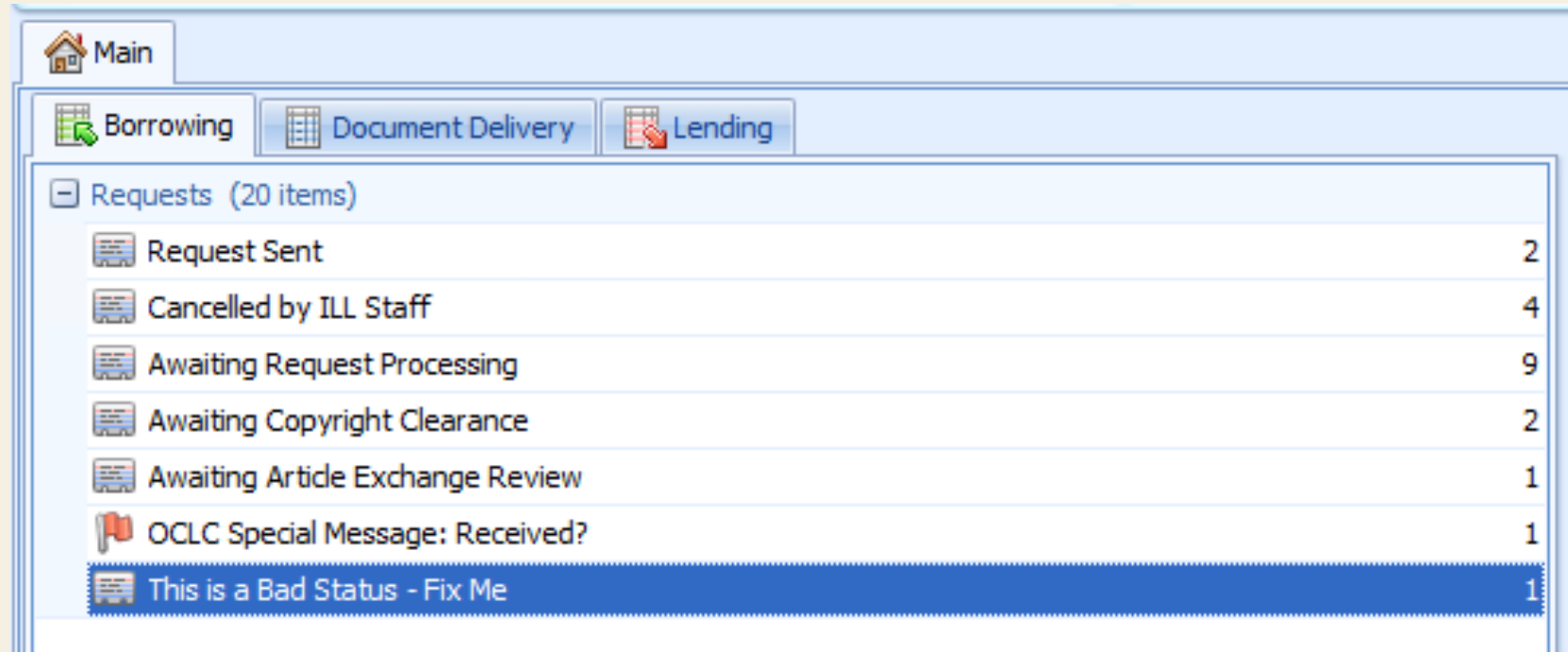
An error occurred while loading the main form:

A network-related or instance-specific error occurred while establishing a connection to SQL Server. The server was not found or was not accessible. Verify that the instance name is correct and that SQL Server is configured to allow remote connections. (provider: Named Pipes Provider, error: 40 – Could not open a connection to SQL Server)

General Troubleshooting Tips:

2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- Other result-based “evidence”:
 - Transactions in the wrong status
 - Illegible Odyssey Articles
 - Etc.



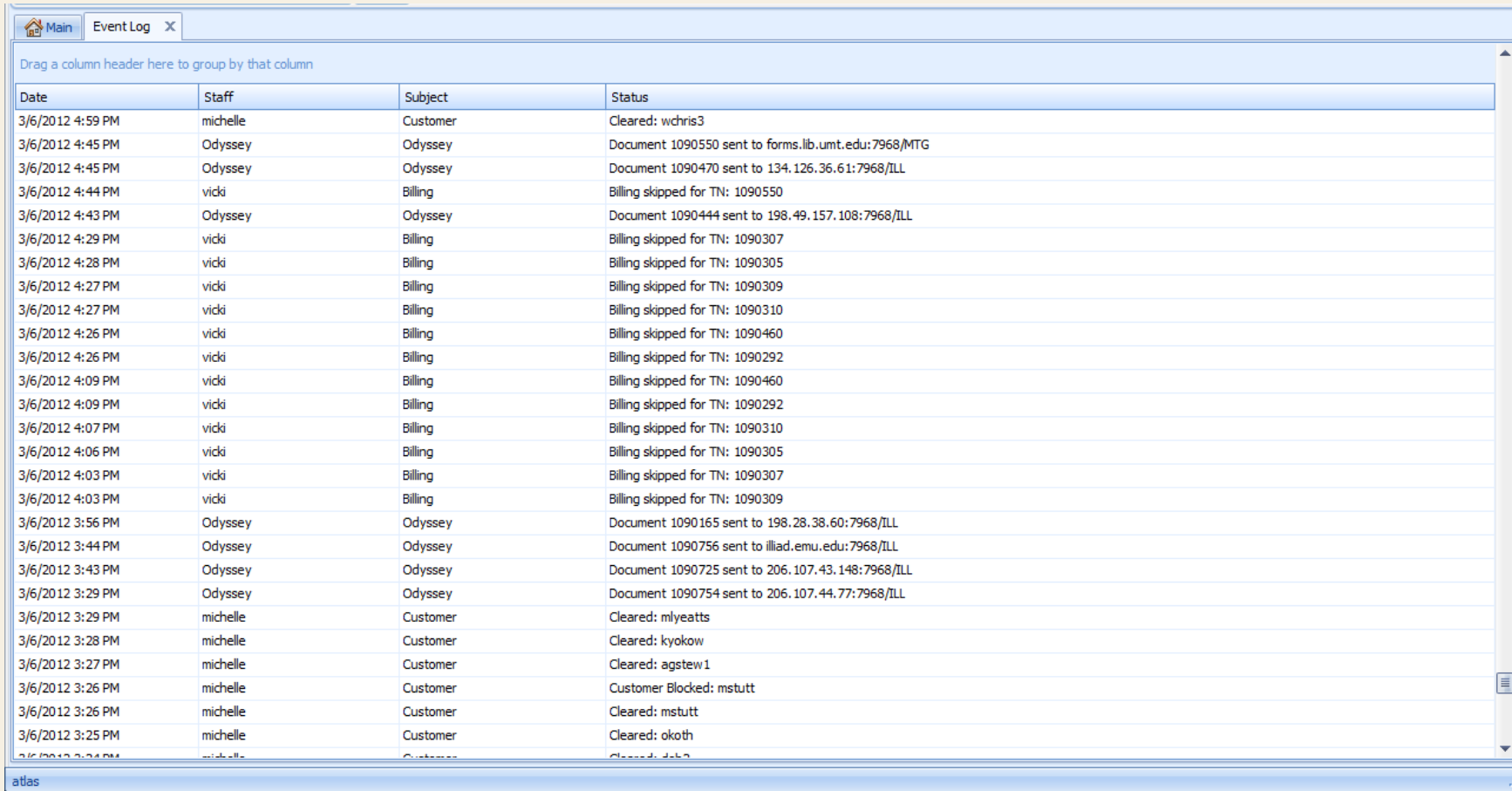
The screenshot shows a software interface with a navigation bar at the top containing 'Main', 'Borrowing', 'Document Delivery', and 'Lending'. Below the navigation bar is a section titled 'Requests (20 items)' which contains a list of request statuses and their counts. The last item in the list, 'This is a Bad Status - Fix Me', is highlighted in blue.

Status	Count
Request Sent	2
Cancelled by ILL Staff	4
Awaiting Request Processing	9
Awaiting Copyright Clearance	2
Awaiting Article Exchange Review	1
OCLC Special Message: Received?	1
This is a Bad Status - Fix Me	1

General Troubleshooting Tips:

2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- ILLiad Client Event Log (System Tab – Eventlog)



Drag a column header here to group by that column

Date	Staff	Subject	Status
3/6/2012 4:59 PM	michelle	Customer	Cleared: wchris3
3/6/2012 4:45 PM	Odyssey	Odyssey	Document 1090550 sent to forms.lib.umt.edu:7968/MTG
3/6/2012 4:45 PM	Odyssey	Odyssey	Document 1090470 sent to 134.126.36.61:7968/ILL
3/6/2012 4:44 PM	vicki	Billing	Billing skipped for TN: 1090550
3/6/2012 4:43 PM	Odyssey	Odyssey	Document 1090444 sent to 198.49.157.108:7968/ILL
3/6/2012 4:29 PM	vicki	Billing	Billing skipped for TN: 1090307
3/6/2012 4:28 PM	vicki	Billing	Billing skipped for TN: 1090305
3/6/2012 4:27 PM	vicki	Billing	Billing skipped for TN: 1090309
3/6/2012 4:27 PM	vicki	Billing	Billing skipped for TN: 1090310
3/6/2012 4:26 PM	vicki	Billing	Billing skipped for TN: 1090460
3/6/2012 4:26 PM	vicki	Billing	Billing skipped for TN: 1090292
3/6/2012 4:09 PM	vicki	Billing	Billing skipped for TN: 1090460
3/6/2012 4:09 PM	vicki	Billing	Billing skipped for TN: 1090292
3/6/2012 4:07 PM	vicki	Billing	Billing skipped for TN: 1090310
3/6/2012 4:06 PM	vicki	Billing	Billing skipped for TN: 1090305
3/6/2012 4:03 PM	vicki	Billing	Billing skipped for TN: 1090307
3/6/2012 4:03 PM	vicki	Billing	Billing skipped for TN: 1090309
3/6/2012 3:56 PM	Odyssey	Odyssey	Document 1090165 sent to 198.28.38.60:7968/ILL
3/6/2012 3:44 PM	Odyssey	Odyssey	Document 1090756 sent to illiad.emu.edu:7968/ILL
3/6/2012 3:43 PM	Odyssey	Odyssey	Document 1090725 sent to 206.107.43.148:7968/ILL
3/6/2012 3:29 PM	Odyssey	Odyssey	Document 1090754 sent to 206.107.44.77:7968/ILL
3/6/2012 3:29 PM	michelle	Customer	Cleared: mlyeatts
3/6/2012 3:28 PM	michelle	Customer	Cleared: kyokow
3/6/2012 3:27 PM	michelle	Customer	Cleared: agstew1
3/6/2012 3:26 PM	michelle	Customer	Customer Blocked: mstutt
3/6/2012 3:26 PM	michelle	Customer	Cleared: mstutt
3/6/2012 3:25 PM	michelle	Customer	Cleared: okoth
3/6/2012 3:24 PM	michelle	Customer	Cleared: deb2

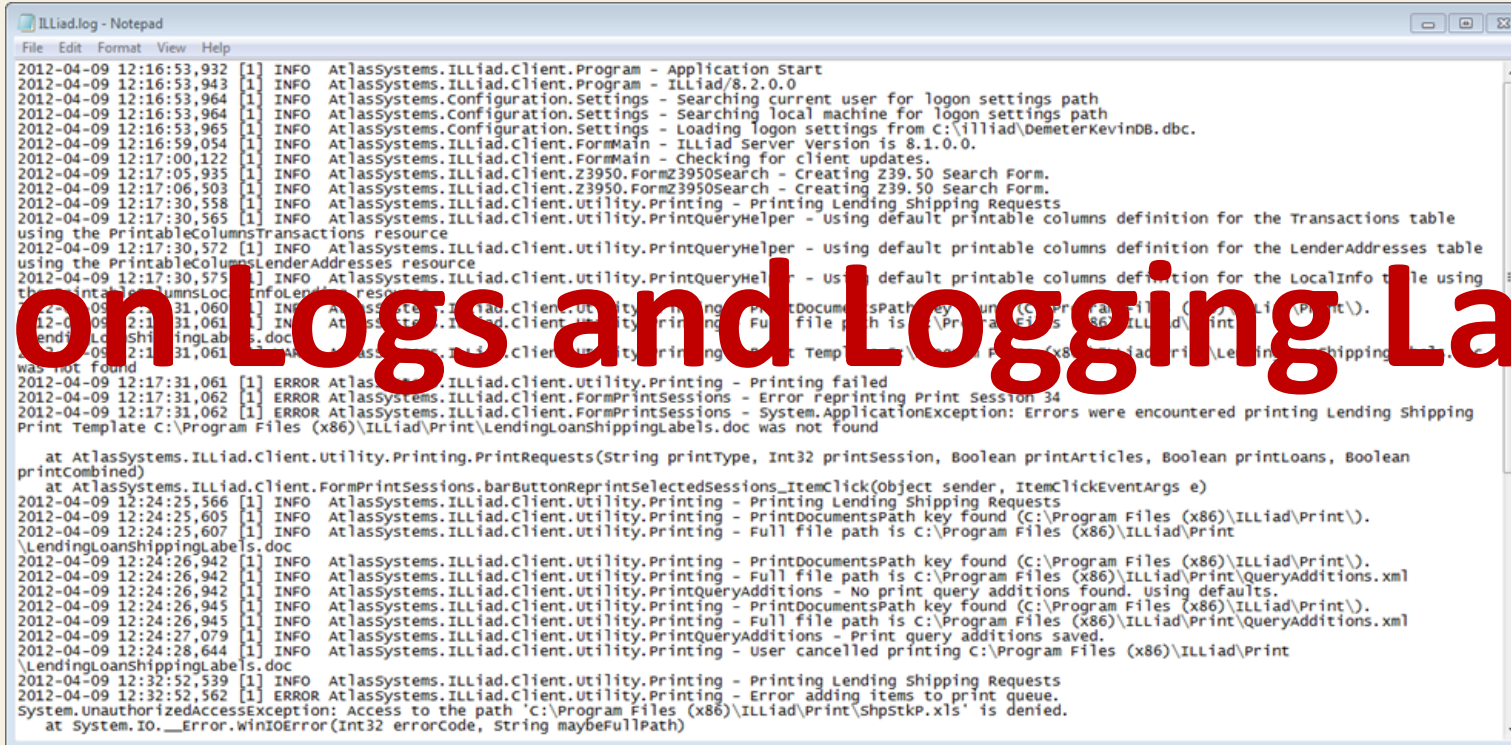
Note: This is a **System Log**. It logs certain Server-side actions as well as your Client-specific actions.

Depending on what you might be looking for, this may or may not be the tool you need.

General Troubleshooting Tips:

2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- Local ILLiad Log File (**Local ILLiad Client ONLY**)
 - C:\Users\<<Windows Username>\Documents\ILLiad\Logs\



```
ILLiad.log - Notepad
File Edit Format View Help
2012-04-09 12:16:53,932 [1] INFO AtlasSystems.ILLiad.Client.Program - Application Start
2012-04-09 12:16:53,943 [1] INFO AtlasSystems.ILLiad.Client.Program - ILLiad/8.2.0.0
2012-04-09 12:16:53,964 [1] INFO AtlasSystems.Configuration.Settings - Searching current user for logon settings path
2012-04-09 12:16:53,964 [1] INFO AtlasSystems.Configuration.Settings - Searching local machine for logon settings path
2012-04-09 12:16:53,965 [1] INFO AtlasSystems.Configuration.Settings - Loading logon settings from C:\Illiad\DemeterKevinDB.dbc.
2012-04-09 12:16:59,054 [1] INFO AtlasSystems.ILLiad.Client.FormMain - ILLiad Server Version is 8.1.0.0.
2012-04-09 12:17:00,122 [1] INFO AtlasSystems.ILLiad.Client.FormMain - Checking for client updates.
2012-04-09 12:17:05,935 [1] INFO AtlasSystems.ILLiad.Client.z3950.Formz3950Search - Creating z39.50 Search Form.
2012-04-09 12:17:06,503 [1] INFO AtlasSystems.ILLiad.Client.z3950.Formz3950Search - Creating z39.50 Search Form.
2012-04-09 12:17:30,558 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Printing Lending Shipping Requests
2012-04-09 12:17:30,565 [1] INFO AtlasSystems.ILLiad.Client.utility.PrintQueryHelper - Using default printable columns definition for the Transactions table
using the PrintableColumnsTransactions resource
2012-04-09 12:17:30,572 [1] INFO AtlasSystems.ILLiad.Client.utility.PrintQueryHelper - Using default printable columns definition for the LenderAddresses table
using the PrintableColumnsLenderAddresses resource
2012-04-09 12:17:30,575 [1] INFO AtlasSystems.ILLiad.Client.utility.PrintQueryHelper - Using default printable columns definition for the LocalInfo table using
the PrintableColumnsLocalInfo resource
2012-04-09 12:17:31,060 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Printing Lending Shipping Requests
2012-04-09 12:17:31,061 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Full file path is C:\Program Files (x86)\ILLiad\Print\
\PrintingLendingShippingLabels.doc
2012-04-09 12:17:31,061 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Printing Lending Shipping Requests
was not found
2012-04-09 12:17:31,061 [1] ERROR AtlasSystems.ILLiad.Client.utility.Printing - Printing failed
2012-04-09 12:17:31,062 [1] ERROR AtlasSystems.ILLiad.Client.FormPrintSessions - Error reprinting Print Session 34
2012-04-09 12:17:31,062 [1] ERROR AtlasSystems.ILLiad.Client.FormPrintSessions - System.ApplicationException: Errors were encountered printing Lending Shipping
Print Template C:\Program Files (x86)\ILLiad\Print\LendingLoansShippingLabels.doc was not found
   at AtlasSystems.ILLiad.Client.utility.Printing.PrintRequests(String printType, Int32 printSession, Boolean printArticles, Boolean printLoans, Boolean
printCombined)
   at AtlasSystems.ILLiad.Client.FormPrintSessions.barButtonReprintsSelectedSessions_ItemClick(Object sender, ItemClickEventArgs e)
2012-04-09 12:24:25,566 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Printing Lending Shipping Requests
2012-04-09 12:24:25,605 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - PrintdocumentsPath key found (C:\Program Files (x86)\ILLiad\Print\
2012-04-09 12:24:25,607 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Full file path is C:\Program Files (x86)\ILLiad\Print
\LendingLoansShippingLabels.doc
2012-04-09 12:24:26,942 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - PrintdocumentsPath key found (C:\Program Files (x86)\ILLiad\Print\
2012-04-09 12:24:26,942 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Full file path is C:\Program Files (x86)\ILLiad\Print\queryAdditions.xml
2012-04-09 12:24:26,942 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - No print query additions found. Using defaults.
2012-04-09 12:24:26,945 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - PrintdocumentsPath key found (C:\Program Files (x86)\ILLiad\Print\
2012-04-09 12:24:26,945 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Full file path is C:\Program Files (x86)\ILLiad\Print\queryAdditions.xml
2012-04-09 12:24:27,079 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Print query additions saved.
2012-04-09 12:24:28,644 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - user cancelled printing C:\Program Files (x86)\ILLiad\Print
\LendingLoansShippingLabels.doc
2012-04-09 12:32:52,539 [1] INFO AtlasSystems.ILLiad.Client.utility.Printing - Printing Lending Shipping Requests
2012-04-09 12:32:52,562 [1] ERROR AtlasSystems.ILLiad.Client.utility.Printing - Error adding items to print queue.
System.UnauthorizedAccessException: Access to the path 'C:\Program Files (x86)\ILLiad\Print\shpstkp.xls' is denied.
   at System.IO.__Error.WinIOError(Int32 errorCode, String maybeFullPath)
```

More on Logs and Logging Later

General Troubleshooting Tips:

2. Evaluate: Can the problem be repeated?

- How consistent is the behavior in question? It can be **exceedingly** helpful to narrow down “behavior consistency”.
- As a general rule:
 - If something **ALWAYS** (or **NEVER**) happens, that tends to point toward possible causes of a more **Configurational** nature:
 - Customization Settings
 - IIS Setup
 - Network Settings
 - Etc.

Customization	
CustKey	Value
EEmailSMTPPort	25
EEmailSMTPServer	127.0.0.1
ESPSupport	Yes
IFMSupport	Yes
ILLiadServerIP	kcf-alpha.cloudapp.net
ILLiadWebPlatformConfig	1
InnopacPatronAPIAddress	http://123.123.123.123:4500
InnopacPatronAPIExclusive	No
InnopacPatronAPIExpireDate	Yes

The screenshot shows the Internet Information Services (IIS) Manager interface. The left pane displays the 'Connections' tree with 'KCF-ALPHA (KCF-ALPHA\kford)' selected. The right pane shows the 'ISAPI and CGI Restrictions' configuration page. The page includes a table with columns for Description, Restriction, and Path. The table lists various ISAPI and CGI extensions, including ASP.NET versions, ASP.NET v2.0.50727, ASP.NET v4.0.30319, and various DLLs like Aeon.dll, Ares.dll, and ILLiad.dll. The Restriction column for all entries is set to 'Allowed'.

Description	Restriction	Path
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\DEV\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\TLS\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\ITS\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\ADMIN\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\SALES\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\GARLIC\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\ONION\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\DILL\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\PEPPER\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\SALT\ILLiad.dll
Aeon	Allowed	C:\Program Files (x86)\Aeon\Web\aeon.dll
Aeon Test Web	Allowed	C:\Program Files (x86)\Aeon\Web\TestWeb\aeon.dll
Ares	Allowed	C:\inetpub\wwwroot\Ares\Ares.dll
AresTestWeb	Allowed	C:\inetpub\wwwroot\Ares\TestWeb\Ares.dll
ASP.NET v2.0.50727	Allowed	C:\Windows\Microsoft.NET\Framework64\v2.0.50727\aspnet_isapi.dll
ASP.NET v2.0.50727	Allowed	C:\Windows\Microsoft.NET\Framework64\v2.0.50727\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_isapi.dll
ILLiad	Allowed	C:\inetpub\wwwroot\illiad\ILLiad.dll
ILLiadLending	Allowed	C:\inetpub\wwwroot\illiad\Lending\ILLiadLending.dll
Server Side Includes	Allowed	C:\Windows\SysWOW64\inetrv\ssinc.dll
Testweb	Allowed	C:\inetpub\wwwroot\illiad\Testweb\ILLiad.dll
Testweb Lending	Allowed	C:\inetpub\wwwroot\illiad\Testweb\Lending\ILLiadLending.dll

General Troubleshooting Tips:

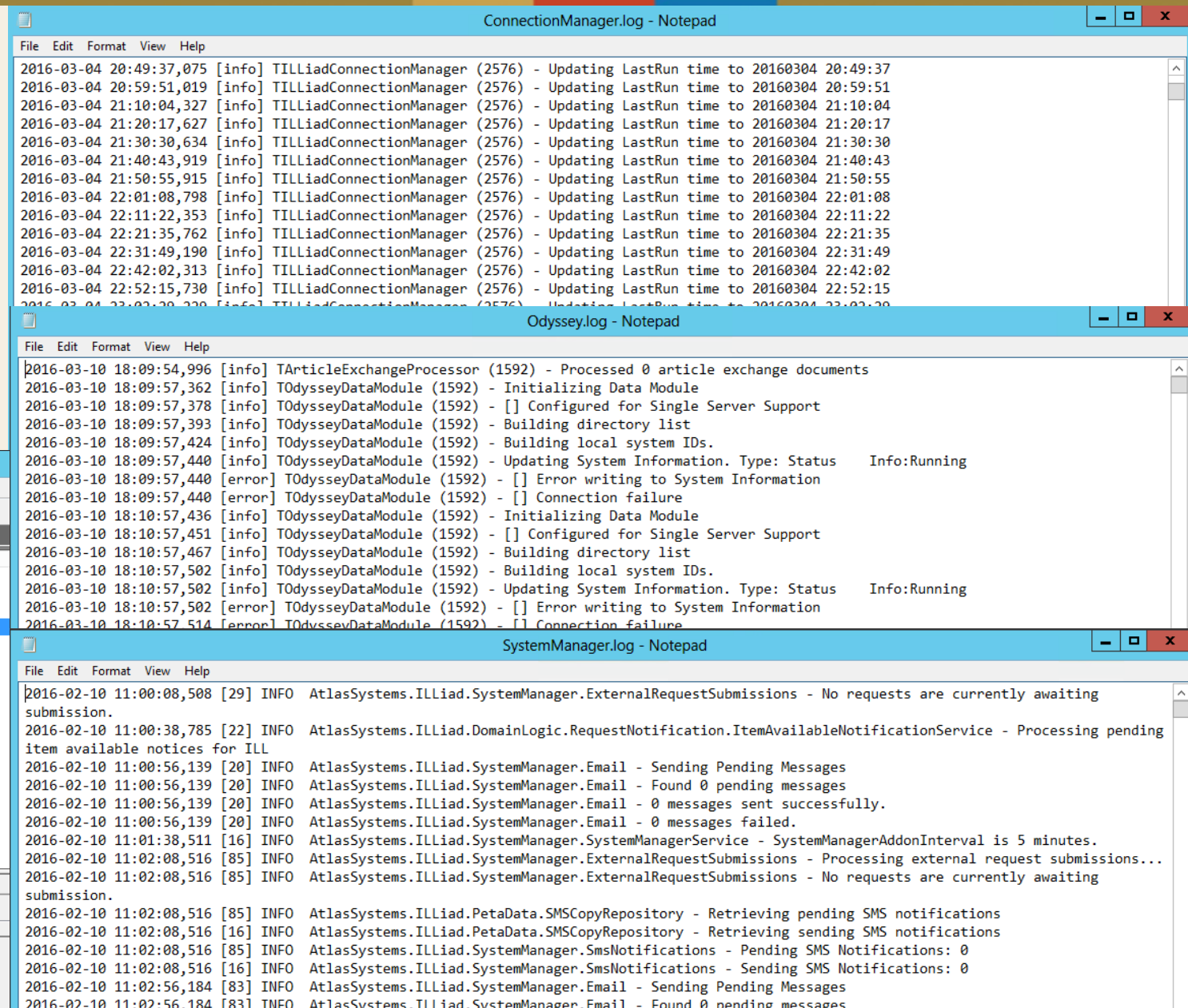
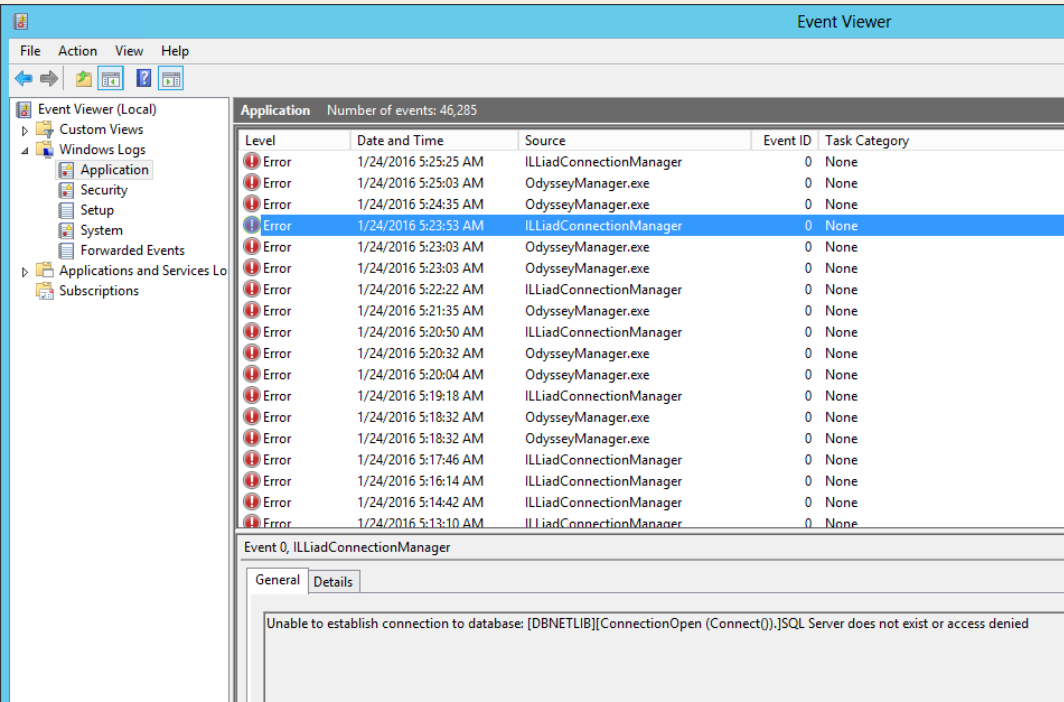
2. Evaluate: Can the problem be repeated?

- How consistent is the behavior in question? It can be **exceedingly** helpful to narrow down “behavior consistency”.
- As a general rule:
 - If something happens **INTERMITTENTLY**, on the other hand, that usually involves **DATA** issues of some kind that are being acted upon differently by something else. (IOW - A condition is sometimes being met, sometimes not.)
 - Missing Required values on SOME User records
 - Incorrect Status values on SOME Transaction Records
 - **BEWARE THE EXCEPTIONS:**
 - Network issues of an intermittent nature that have NOTHING whatsoever to do with ILLiad can potentially impact ILLiad behavior.
 - This fits neither of the last two scenarios.
 - Yes, it’s intermittent, but the behavior is impacting ILLiad from outside the system.

General Troubleshooting Tips:

3. Investigate:

- Error Messages:
 - Where to look for errors:
 - ILLiad Logs
 - ILLiad System Information
 - Windows Event Viewer



General Troubleshooting Tips:

3. Investigate:

- Error Messages:
- What does the error tell you?
 - What system generated it?
 - Does it indicate anything specific?
 - Error numbers can be Googled.

General Troubleshooting Tips:

3. Investigate:

- Error Messages:
- If no error is generated, what does THAT tell you?

General Troubleshooting Tips:

3. Investigate:

- Can you identify a direct trigger (**NOT** necessarily a **CAUSE**) for the behavior/misbehavior/failure?
 - When X happens, Y follows.
 - When X happens and Condition A is met, Y follows.
 - When X and Y happen simultaneously, and Condition A is met.....
 - When X and Y happen simultaneously, and Conditions A, B, and C are met...

General Troubleshooting Tips:

4. Analyze:

- What parts of the system are related to this behavior?
 - Can you determine what components are involved in the affected process?
 - IIS?
 - The Connection Manager Service?
 - The ILLiad Web Platform?
 - Etc.
- Do they log anything?
 - Testing: Revisit Logging in **DEBUG** mode. (More on this shortly.)

General Troubleshooting Tips:

5. Design:

- Given what I know at this stage, how do I fix things? This will of course depend on the nature of the problem, but:
 - If it's configurational in nature, change the configuration accordingly.
 - If it's permissions-related, change permissions accordingly.
 - If it's Data-related, fix both the **CAUSE** of the data issue as well as the **EXISTING** data. ****In that order.****
 - Etc.
- Don't be afraid to ask for help.
 - This is of course why OCLC Support and Atlas Service folks exist.

General Troubleshooting Tips:

6. Act:

- Once I have a solution in mind, how do I fix things? This too will depend on the nature of the problem, but:
 - For any changes that impact service functions, stop the service(s) first.
 - This forces them to use the new settings instead of persisting under the old ones.
 - Note any existing settings/permissions/positions/locations/ etc. that you intend to change **BEFORE** you change them.
 - This way, you can restore them if you goofed somewhere in your attempted solution.
 - If files are being changed (templates, web pages, etc.), save a backup copy of the originals somewhere safe before replacing them with new versions.
 - Same reason.
 - If the database is to be impacted in **ANY** way, back it up before you do anything.
 - Same reason.
- Not kidding here! The bigger the mess in the database, the more likely I'll be the one asked to try to fix things. Pure self-interest on my part, I assure you. 😊

General Troubleshooting Tips:



“If it looks like a duck, and quacks like a duck, we have at least to consider the possibility that we have a small aquatic bird of the family anatidae on our hands.”

- Douglas Adams

SQL CONNECTIVITY ISSUES

SQL Connectivity Issues:

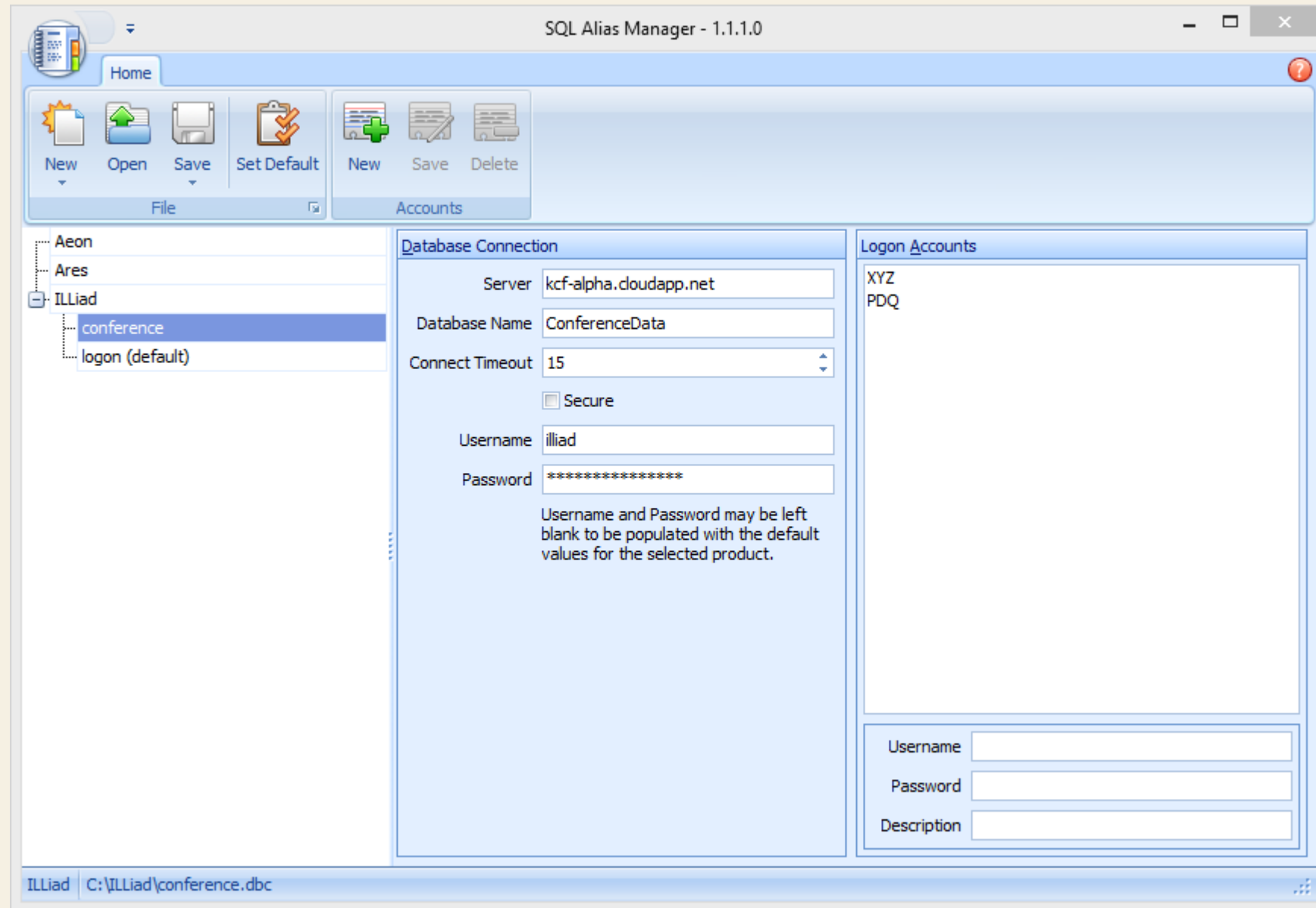
- Client Connectivity: How do the ILLiad components talk to the SQL Server and the ILLiad database?
 - Over the network.
 - All standard Firewalls apply here.
 - Institutional
 - **Machine-specific (Windows Firewall)*****
 - Everything in-between (if it exists).
 - Using the designated SQL Port.
 - Default: **1433**.
 - Inbound to the SQL Server
 - Outbound from any client or server running web or ILLiad services to the SQL Server
 - Changeable.
 - For Hosted Systems (OCLC or Atlas), alternate port **1344**

SQL Connectivity Issues:

- Client Connectivity: Choosing Alternate SQL Ports (or any other new port, really).
 - Make sure the alternate port is not used by anything else.
 - 1344 – Good
 - 80 – BAD
 - Make sure there are no Firewall/ Network blockages on the selected port between your clients and the server.

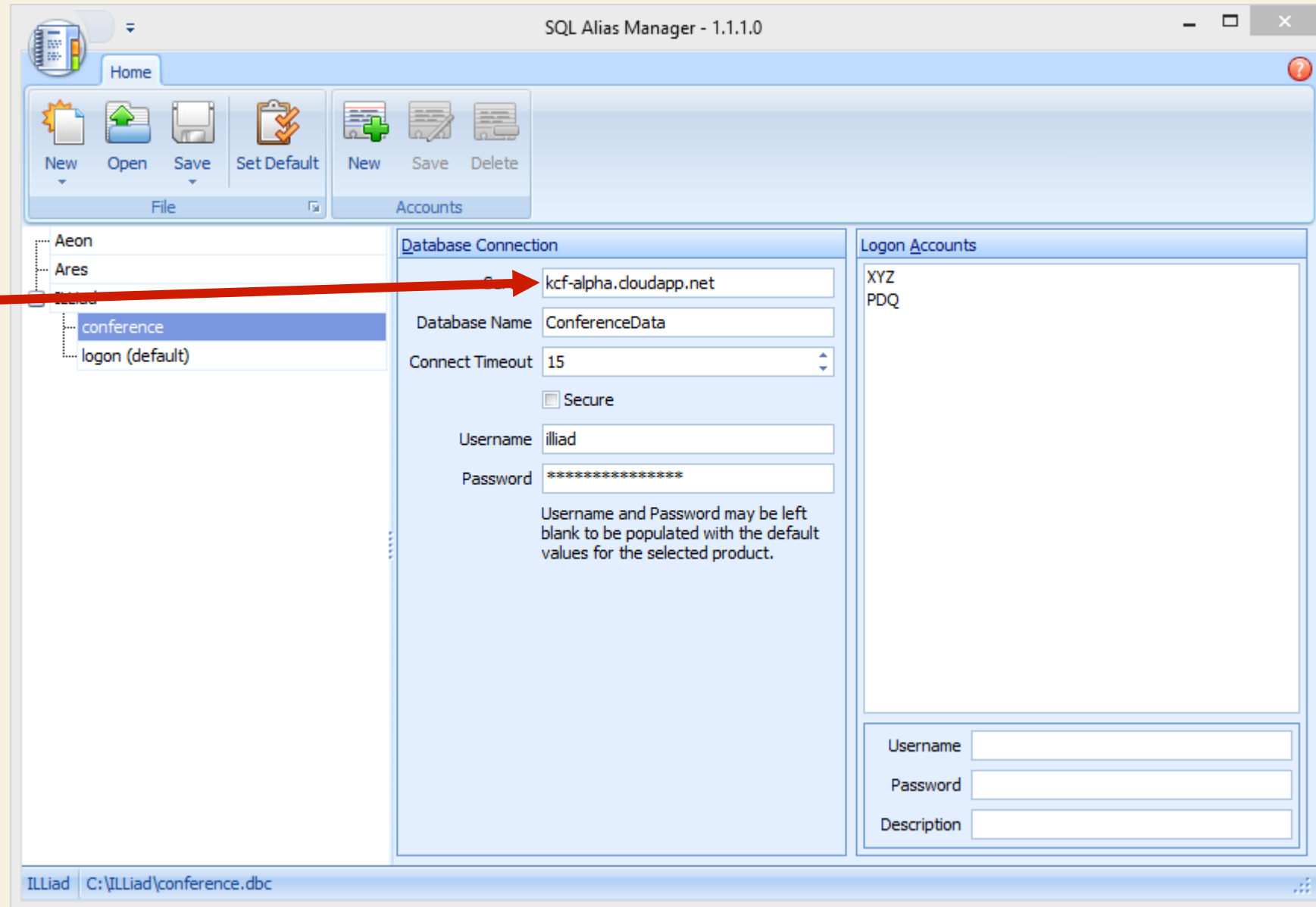
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:



SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - The Server Value:
 - Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.

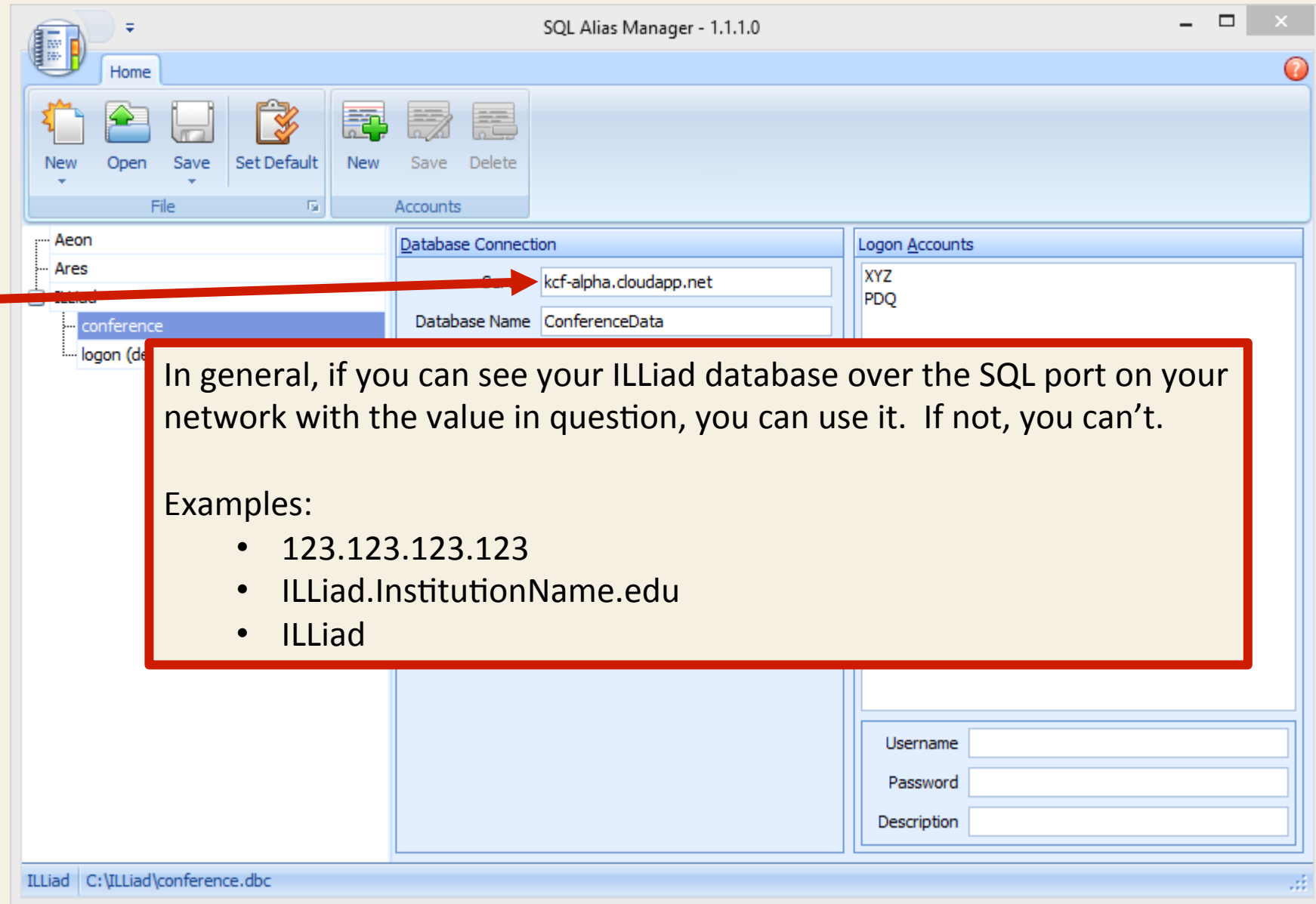


SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- The Server Value:

- Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.



SQL Alias Manager - 1.1.1.0

Home

New Open Save Set Default New Save Delete

File Accounts

Aeon
Ares
conference
logon (de

Database Connection

kcf-alpha.cloudapp.net

Database Name ConferenceData

Logon Accounts

XYZ
PDQ

Username
Password
Description

ILLiad C:\ILLiad\conference.dbc

In general, if you can see your ILLiad database over the SQL port on your network with the value in question, you can use it. If not, you can't.

Examples:

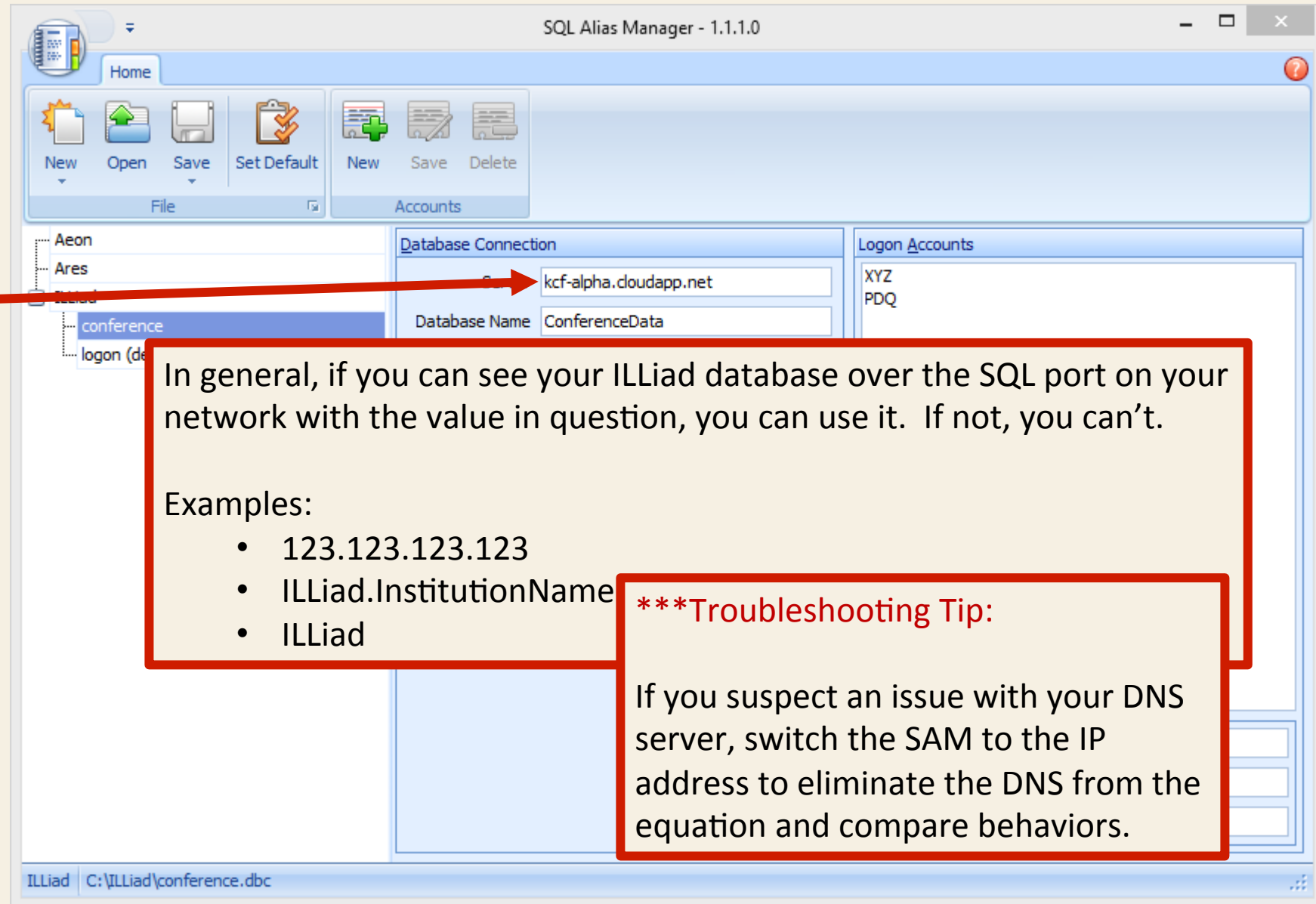
- 123.123.123.123
- ILLiad.InstitutionName.edu
- ILLiad

SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- The Server Value:

- Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.



SQL Alias Manager - 1.1.1.0

Home

New Open Save Set Default New Save Delete

File Accounts

Aeon

Ares

conference

logon (de

Database Connection

kcf-alpha.cloudapp.net

Database Name ConferenceData

Logon Accounts

XYZ

PDQ

In general, if you can see your ILLiad database over the SQL port on your network with the value in question, you can use it. If not, you can't.

Examples:

- 123.123.123.123
- ILLiad.InstitutionName
- ILLiad

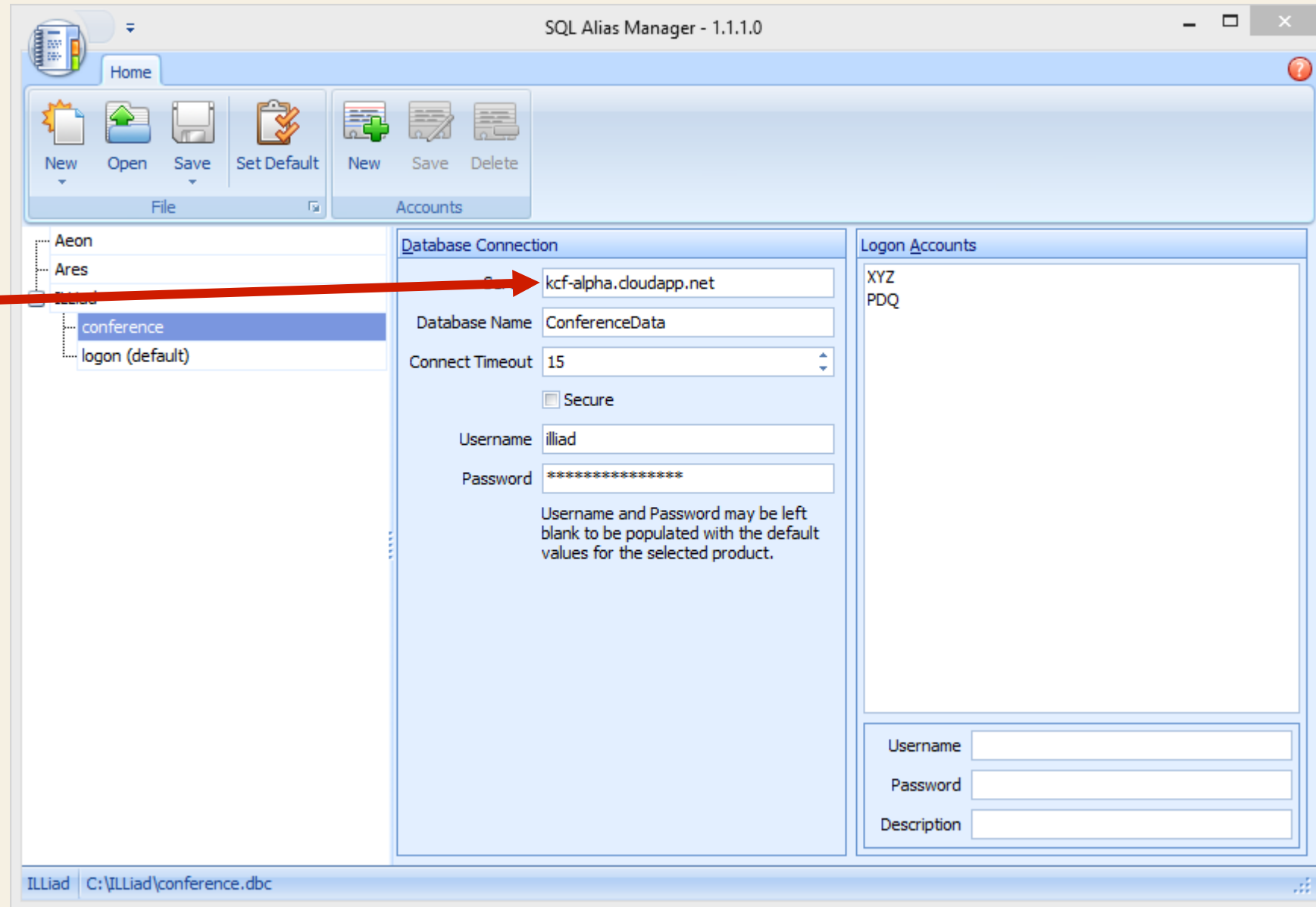
*****Troubleshooting Tip:**

If you suspect an issue with your DNS server, switch the SAM to the IP address to eliminate the DNS from the equation and compare behaviors.

ILLiad C:\ILLiad\conference.dbc

SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - The Server Value:
 - Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.

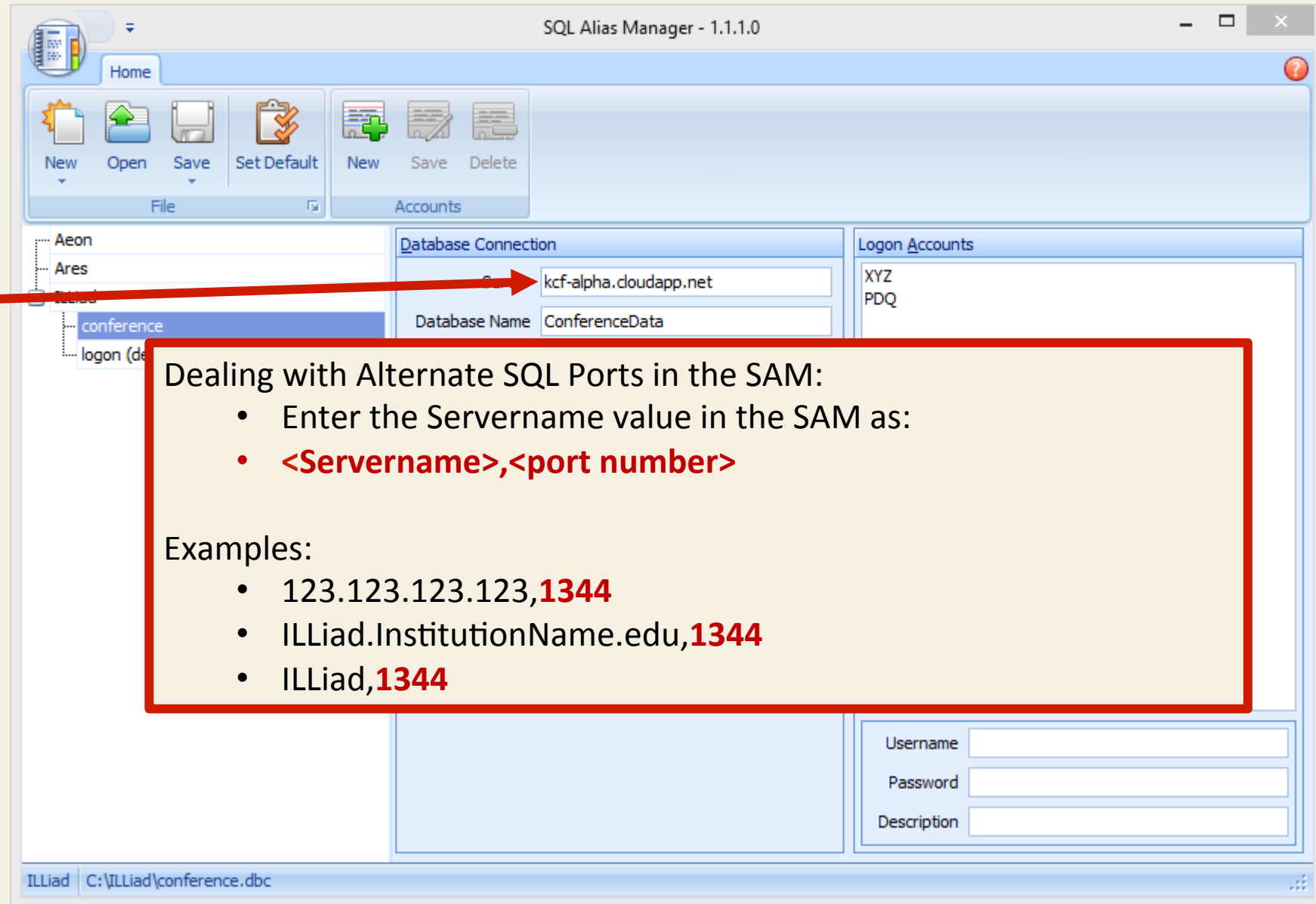


SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- The Server Value:

- Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.



The screenshot shows the SQL Alias Manager (SAM) 1.1.1.0 interface. The 'Database Connection' pane is active, showing the server name 'kcf-alpha.cloudapp.net' and the database name 'ConferenceData'. A red arrow points from the 'Server Value' text in the slide to the server name field. The 'Logon Accounts' pane shows 'XYZ' and 'PDQ'. The status bar at the bottom indicates the current connection is 'ILLiad C:\ILLiad\conference.dbc'.

Dealing with Alternate SQL Ports in the SAM:

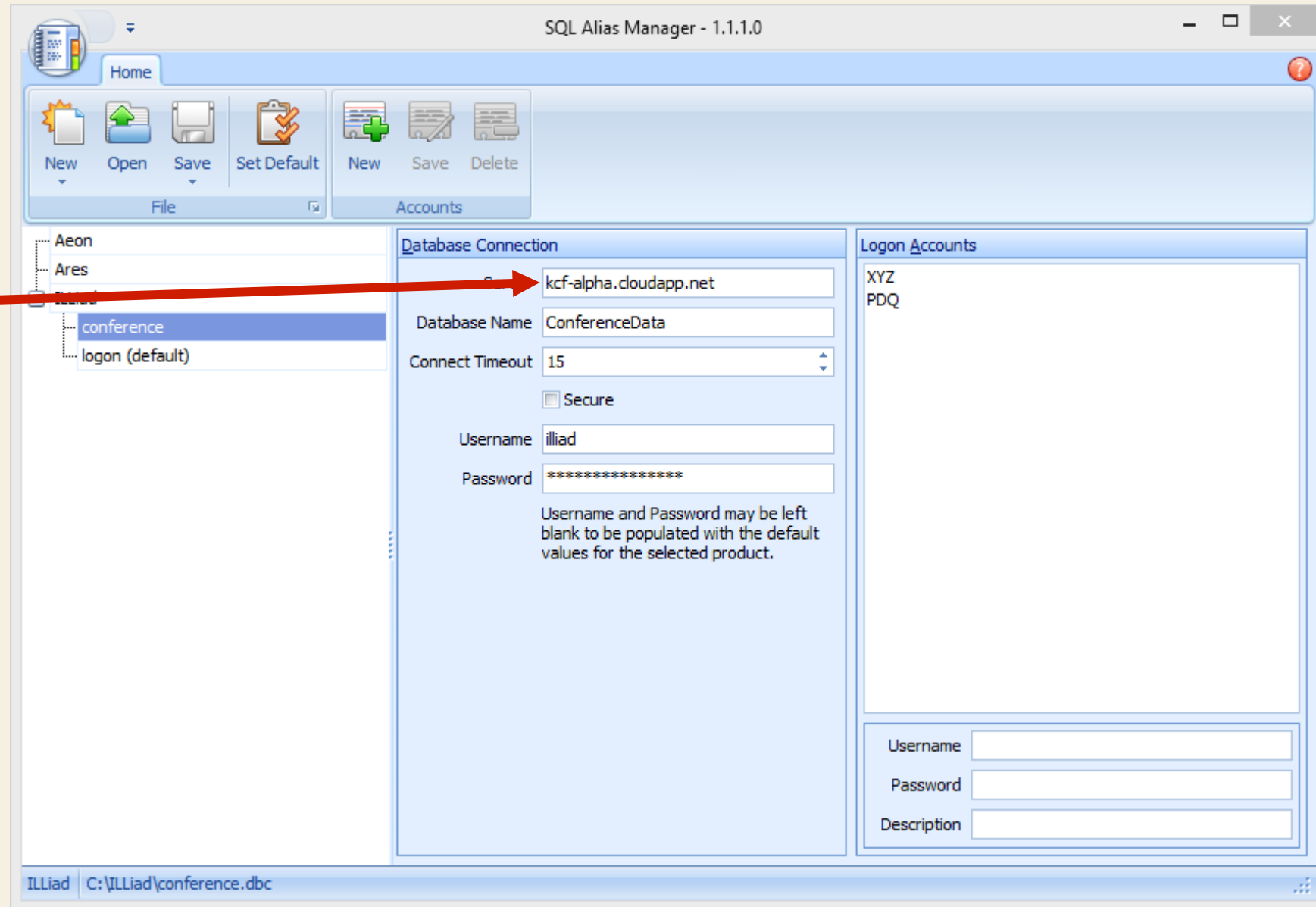
- Enter the Servername value in the SAM as:
- **<Servername>,<port number>**

Examples:

- 123.123.123.123,**1344**
- ILLiad.InstitutionName.edu,**1344**
- ILLiad,**1344**

SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - The Server Value:
 - Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.

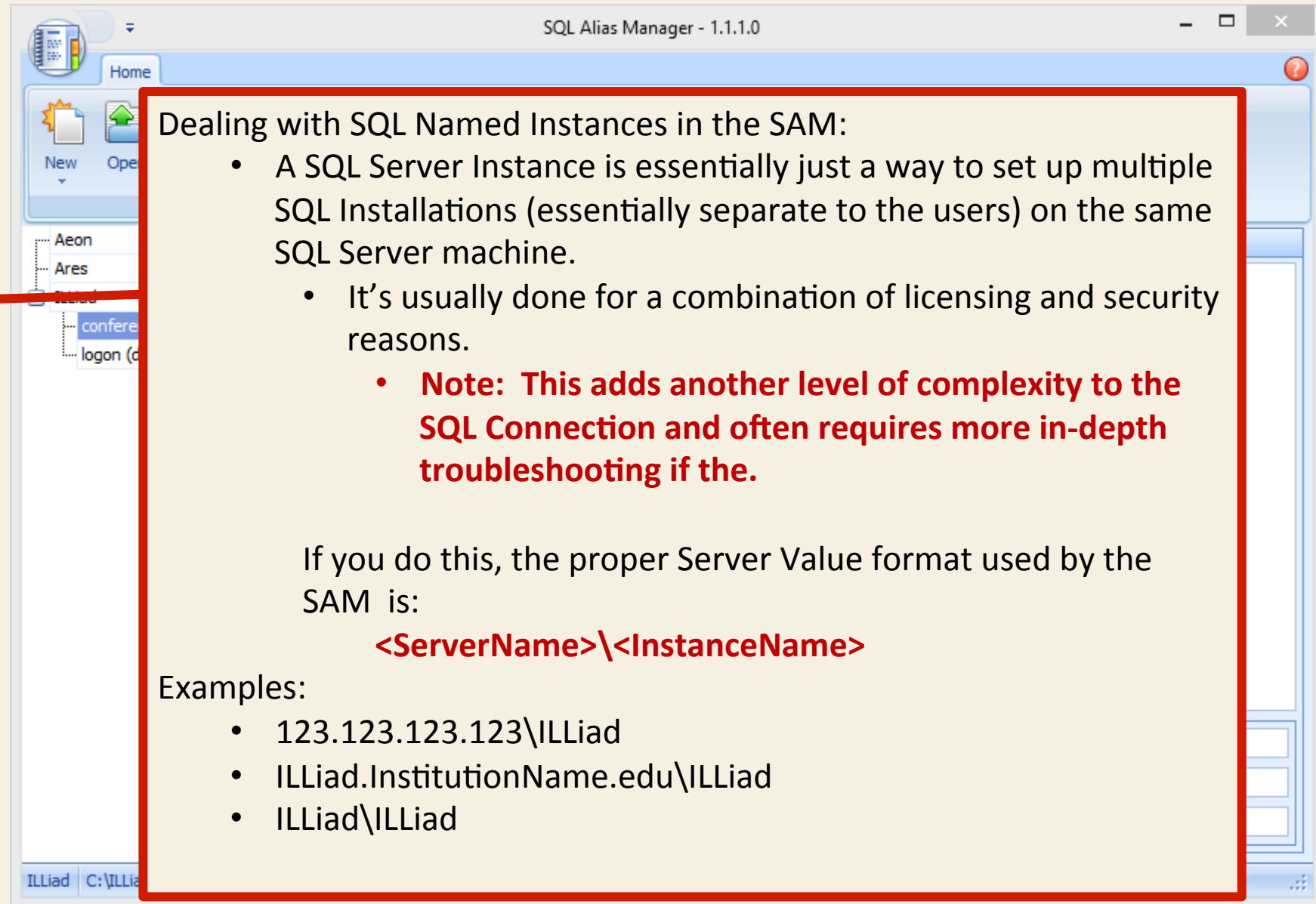


SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- The Server Value:

- Either **IP** or **Name** is fine, as long as nothing on the network is requiring one value over the other.



SQL Alias Manager - 1.1.1.0

Home

New Open

Aeon

Ares

confer

logon (c

ILLiad C:\ILLiad

Dealing with SQL Named Instances in the SAM:

- A SQL Server Instance is essentially just a way to set up multiple SQL Installations (essentially separate to the users) on the same SQL Server machine.
- It's usually done for a combination of licensing and security reasons.
 - **Note: This adds another level of complexity to the SQL Connection and often requires more in-depth troubleshooting if the.**

If you do this, the proper Server Value format used by the SAM is:

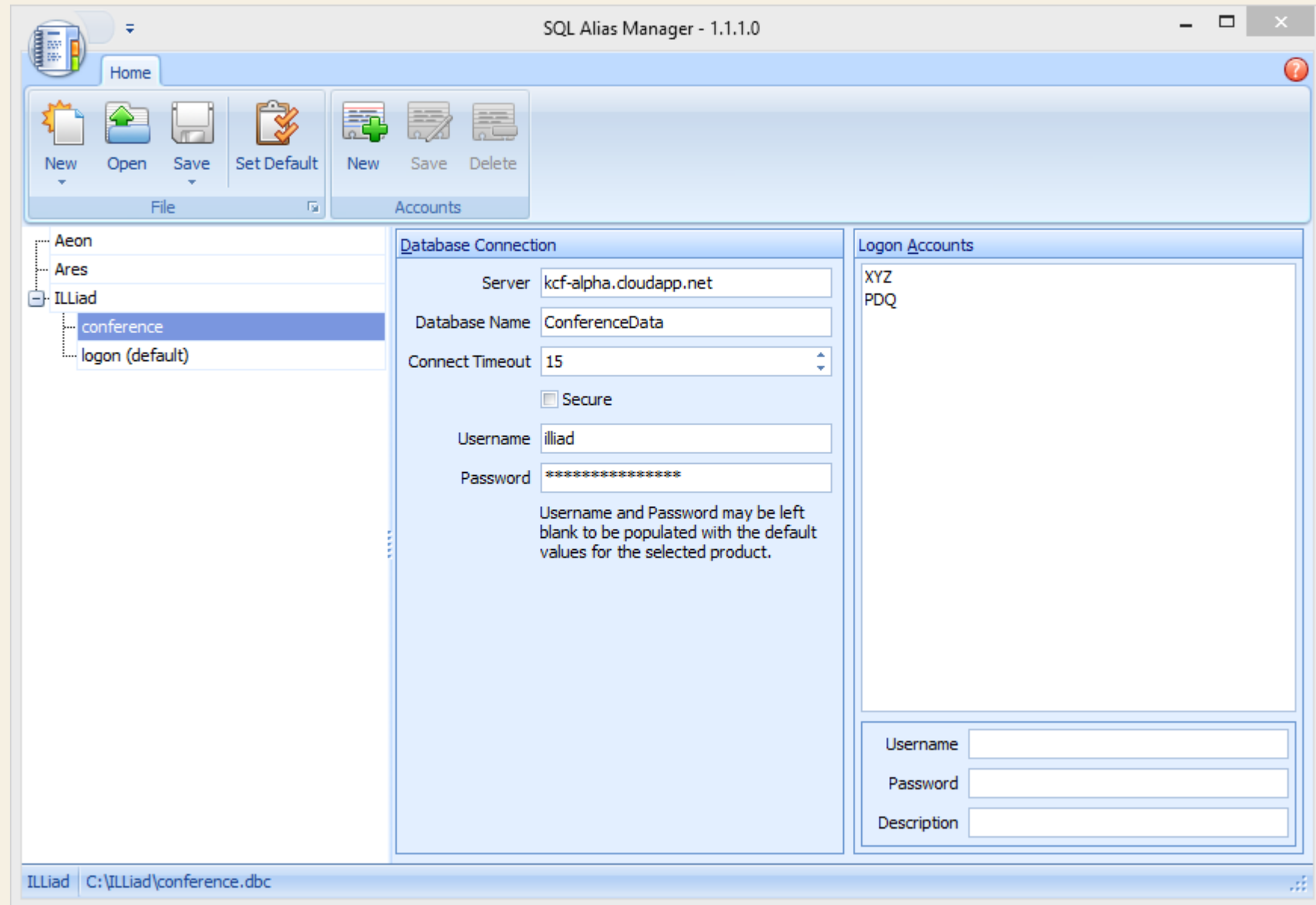
<ServerName>\<InstanceName>

Examples:

- 123.123.123.123\ILLiad
- ILLiad.InstitutionName.edu\ILLiad
- ILLiad\ILLiad

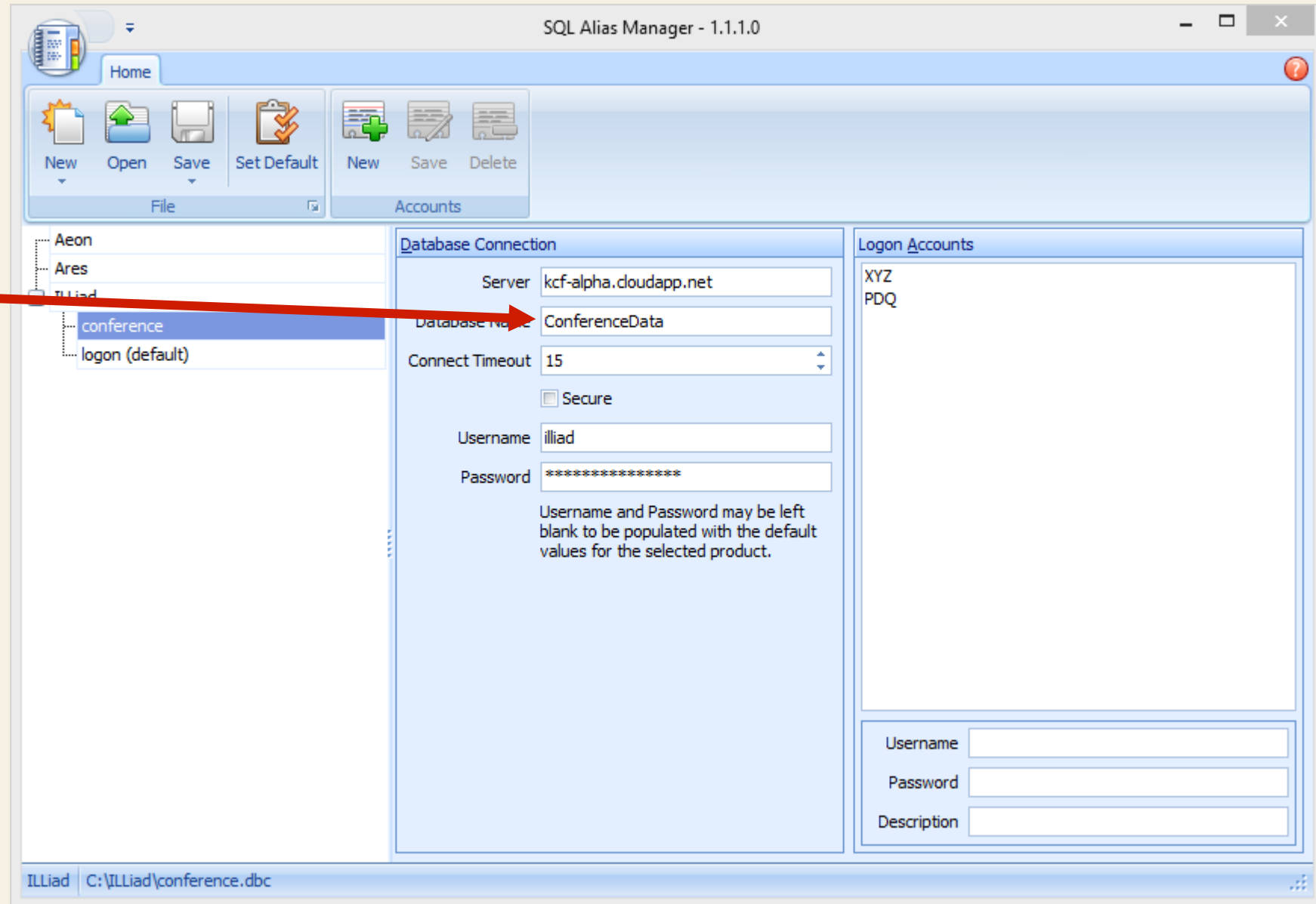
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:



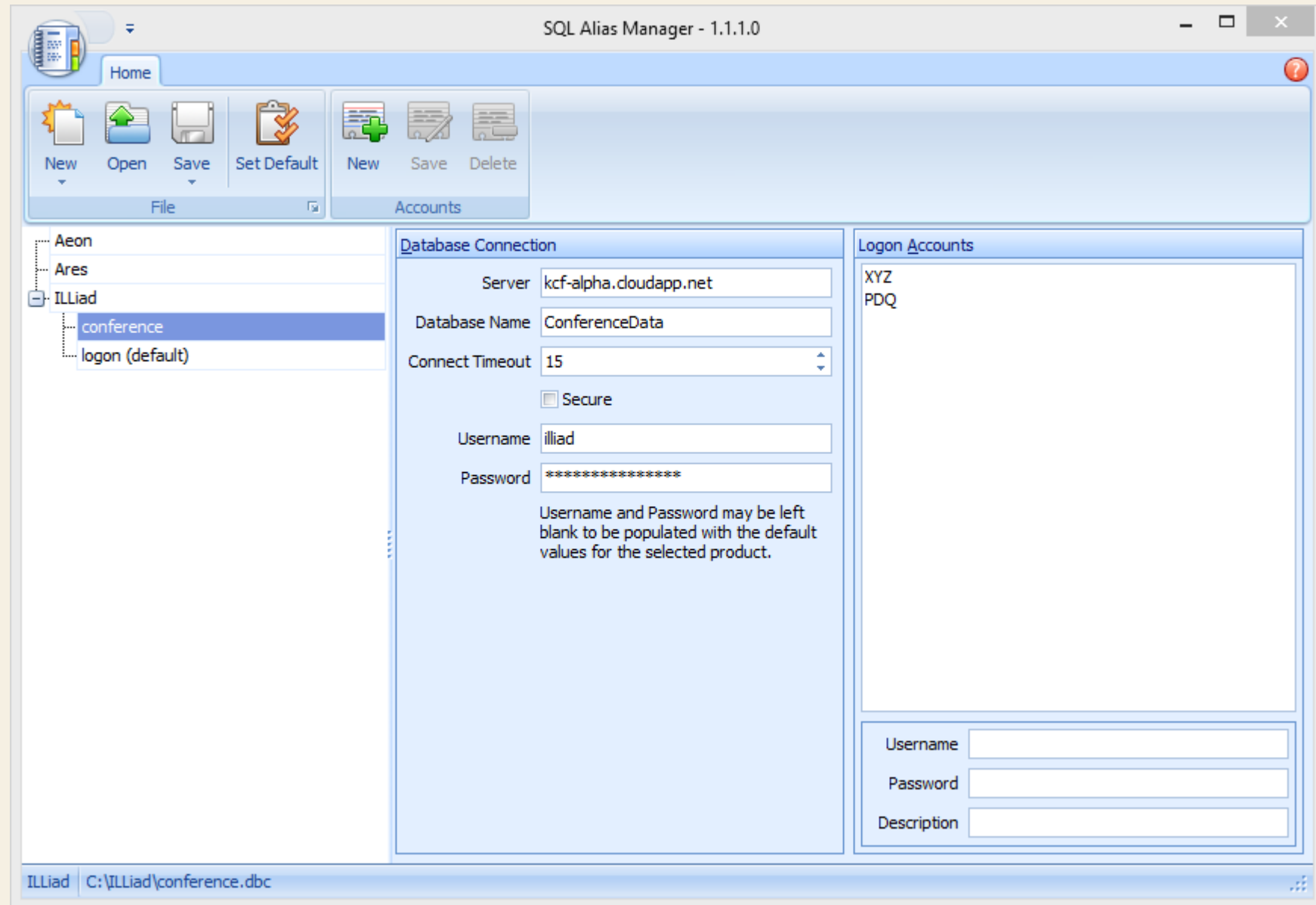
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - Database Name:
 - This value **MUST** match the name of the ILLiad Database on the SQL Server.
 - ILLData
 - MetroUData
 - Bob



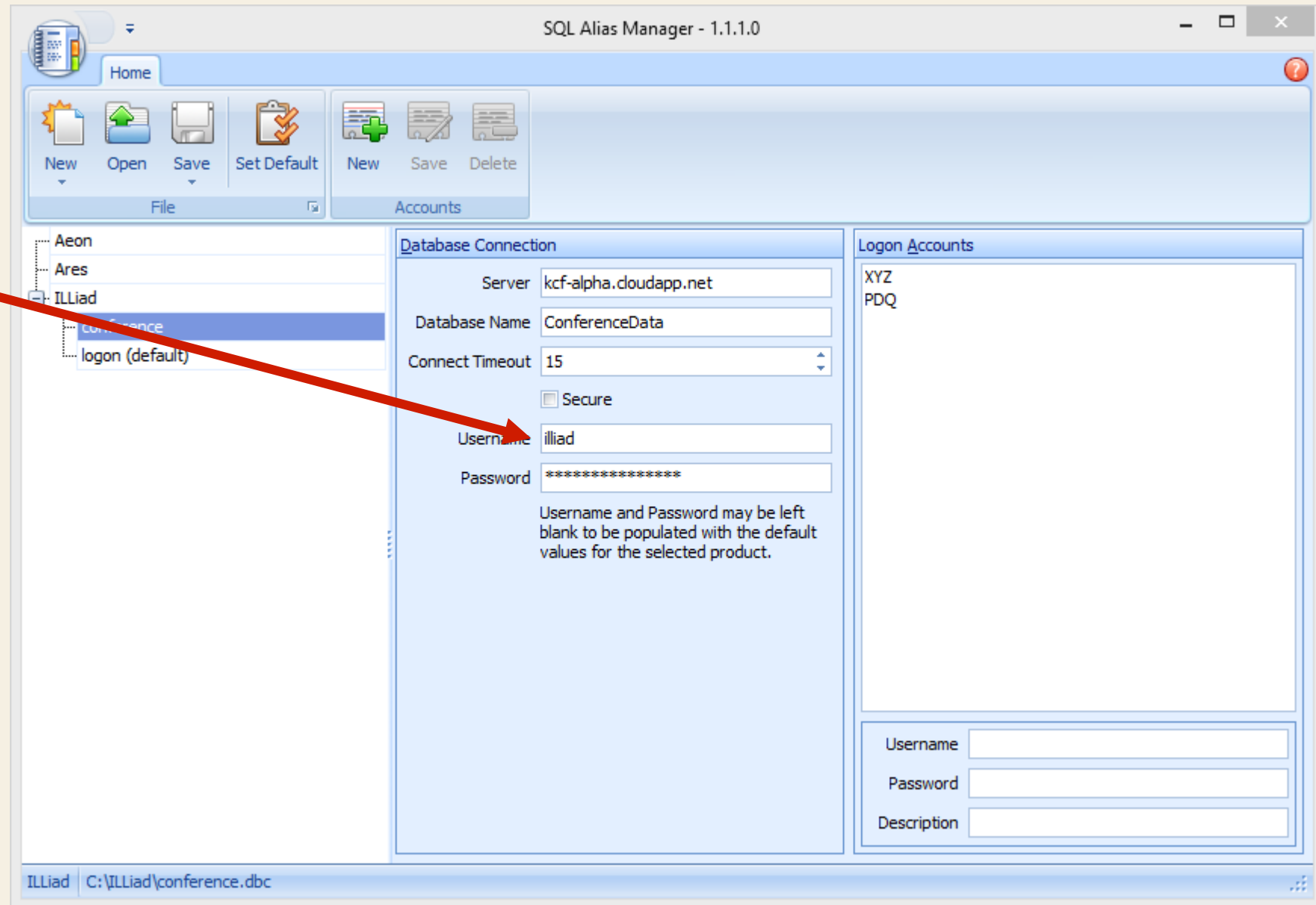
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:



SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - Username:
 - This is **RARELY** anything other than “illiad”.
 - Technically speaking, it **CAN** be pretty much anything you decide you want to use.

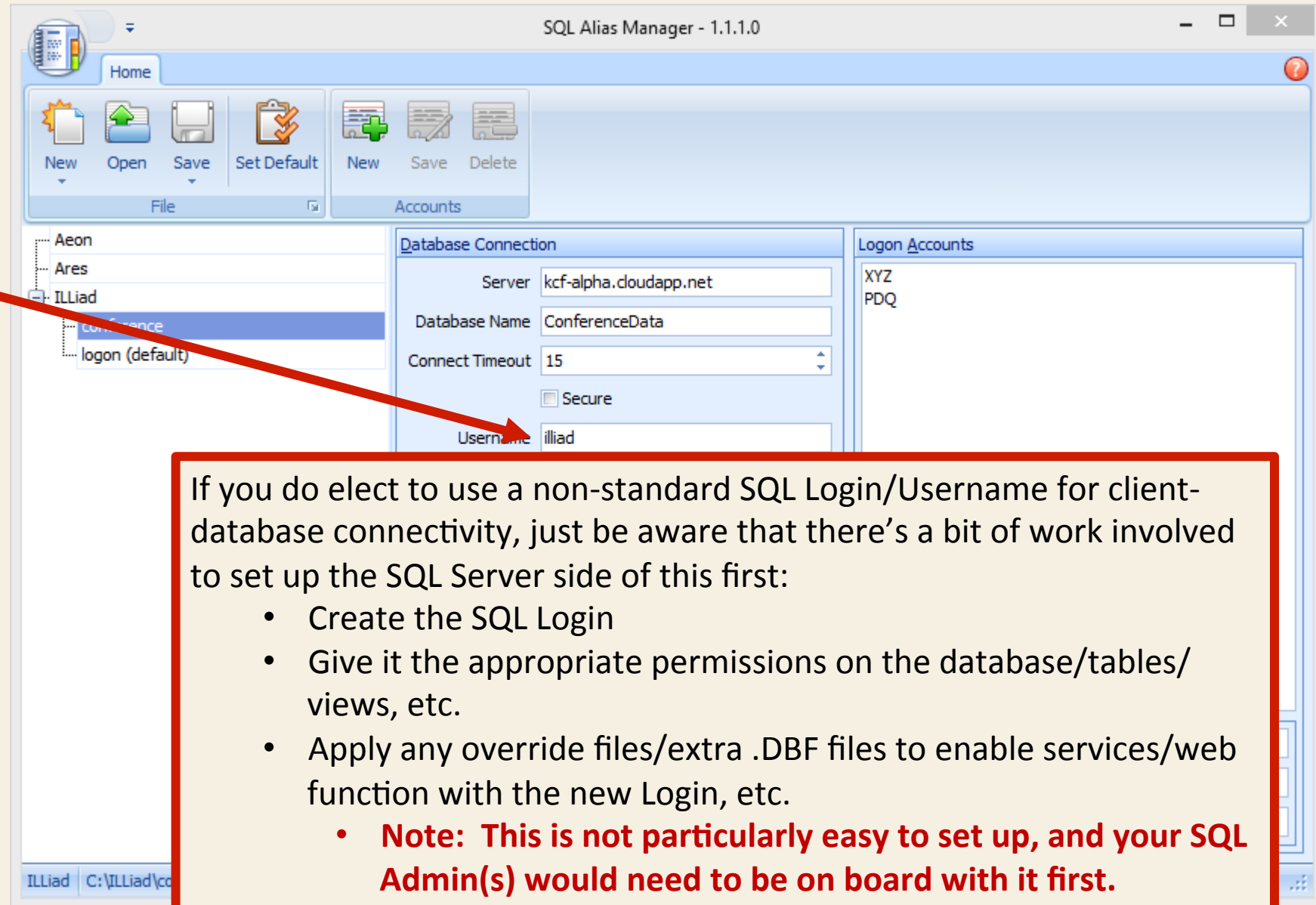


SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- Username:

- This is **RARELY** anything other than “illiad”.
 - Technically speaking, it **CAN** be pretty much anything you decide you want to use.



The screenshot shows the SQL Alias Manager interface. The 'Database Connection' pane is active, showing the following configuration:

- Server: kcf-alpha.cloudapp.net
- Database Name: ConferenceData
- Connect Timeout: 15
- Secure:
- Username: illiad

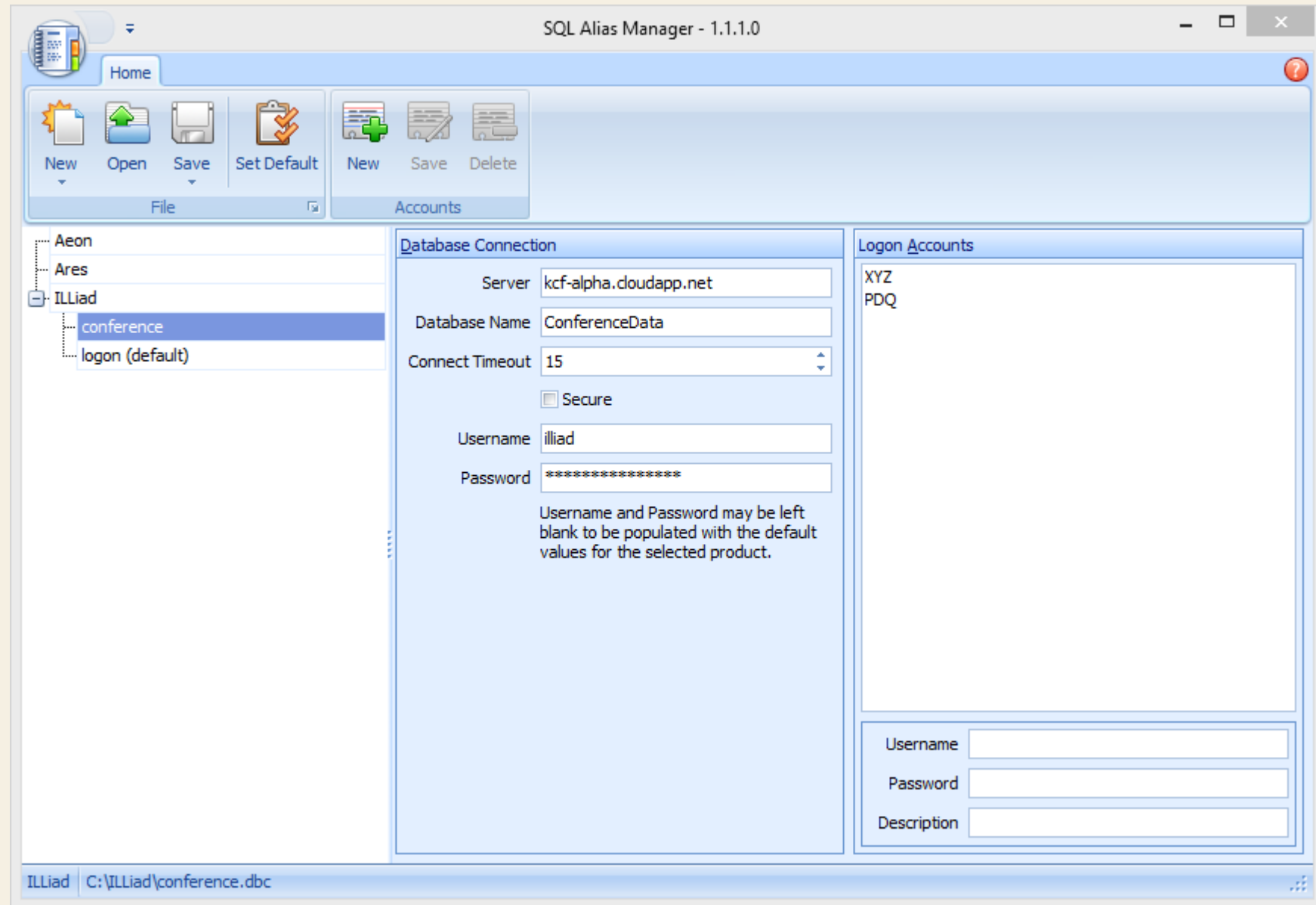
The 'Logon Accounts' pane shows 'XYZ' and 'PDQ'. A red arrow points from the 'Username' field in the 'Database Connection' pane to the text box below.

If you do elect to use a non-standard SQL Login/Username for client-database connectivity, just be aware that there's a bit of work involved to set up the SQL Server side of this first:

- Create the SQL Login
- Give it the appropriate permissions on the database/tables/views, etc.
- Apply any override files/extra .DBF files to enable services/web function with the new Login, etc.
- **Note: This is not particularly easy to set up, and your SQL Admin(s) would need to be on board with it first.**

SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:



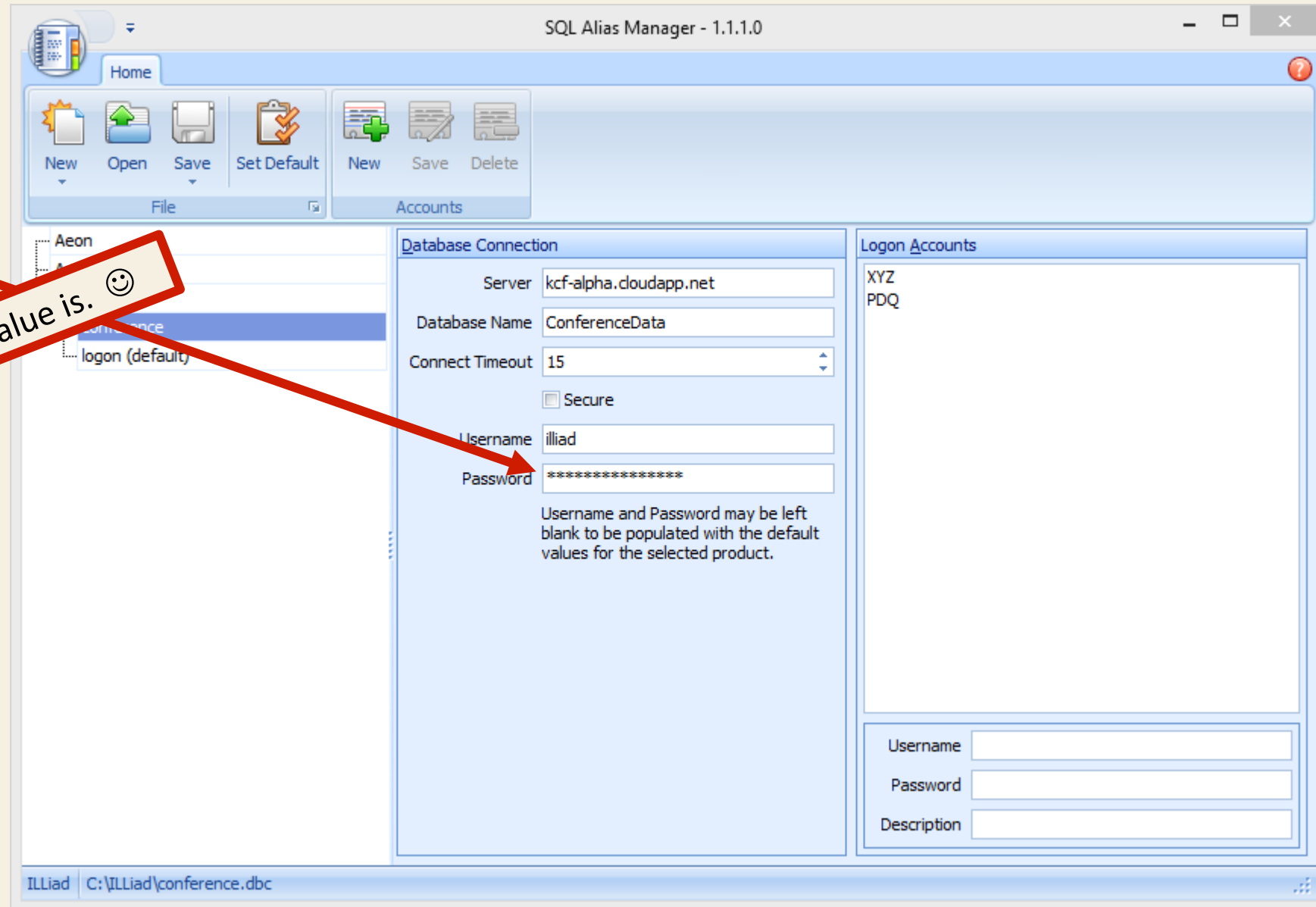
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- Password:

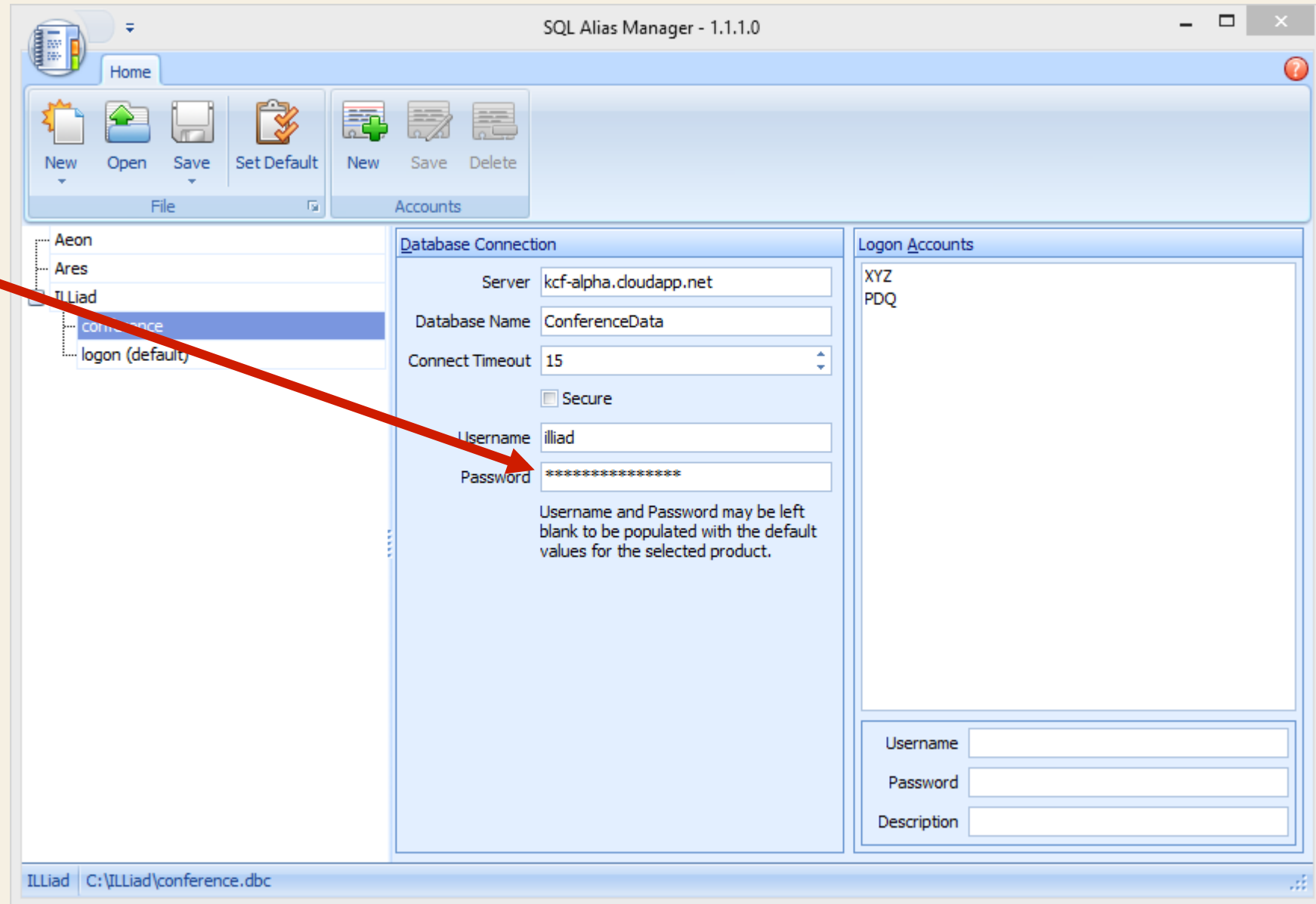
- This almost always means the password value.

No, I can't tell you what the default value is. 😊



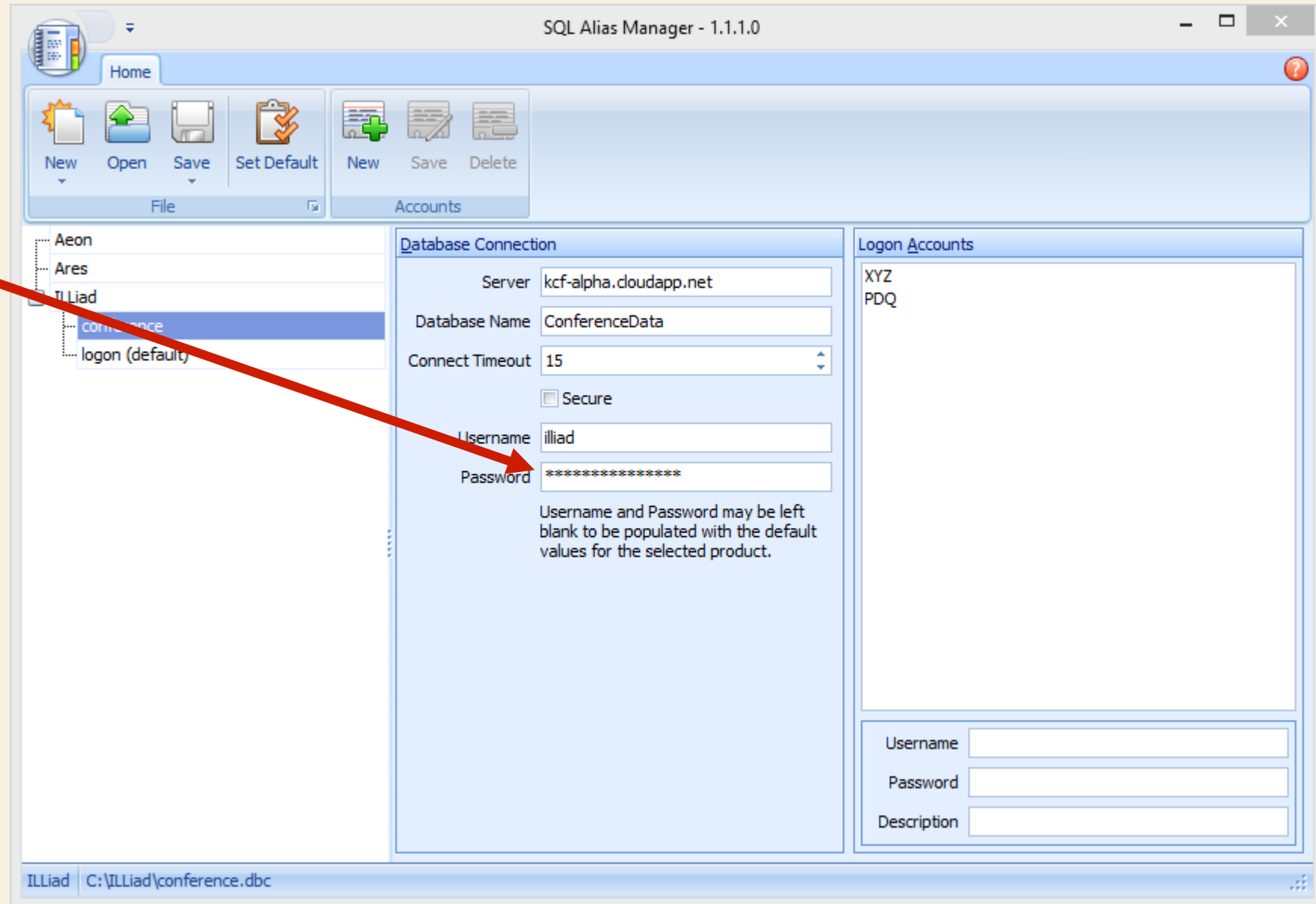
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - Password:
 - This almost always the default password value.



SQL Connectivity Issues:

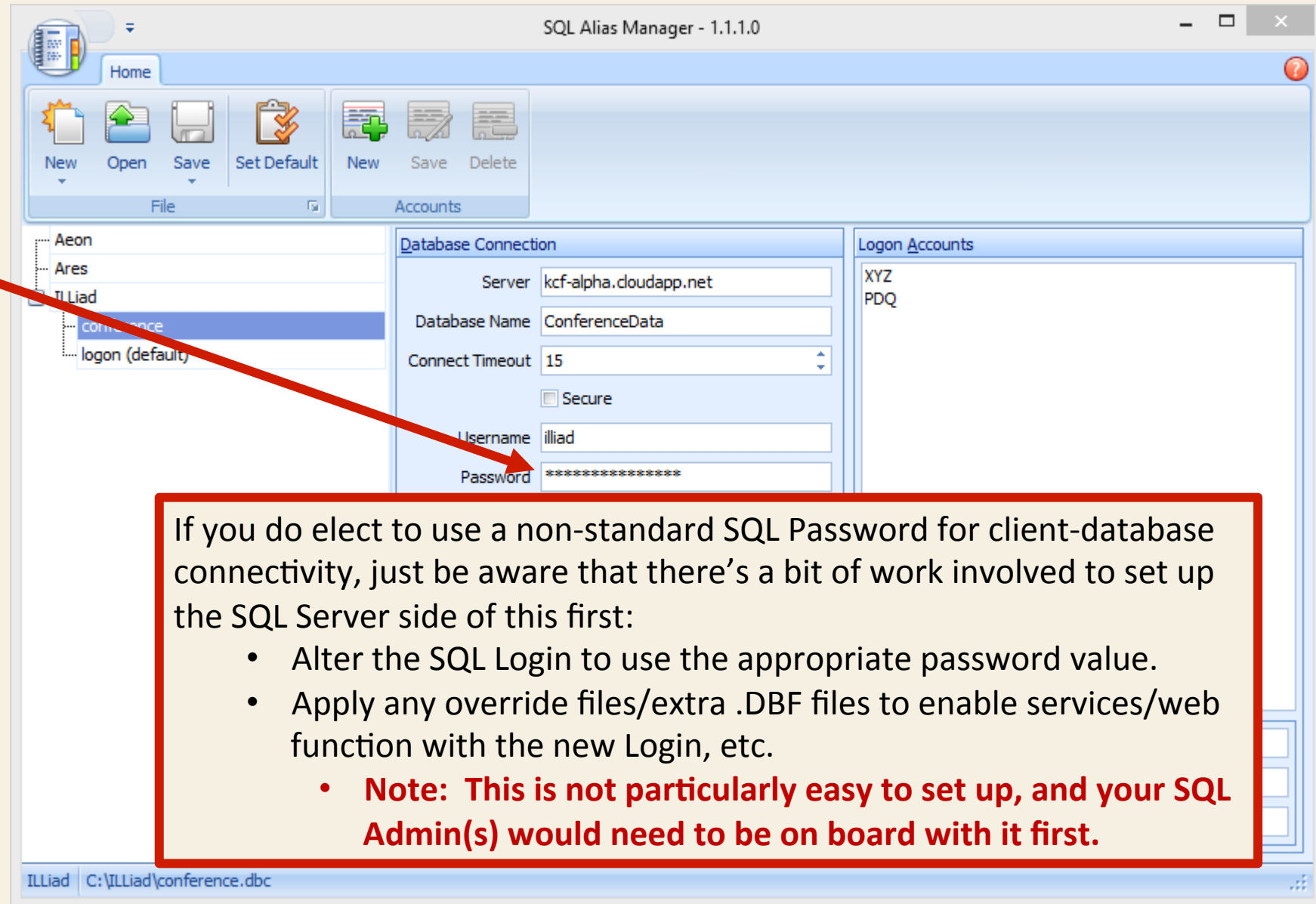
- Proper SQL Alias Manager (SAM) Configuration:
 - Password:
 - This almost always the default password value.
 - Technically speaking, this password **CAN** be pretty much anything you decide you want to use.



SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:

- Password:
 - This almost always the default password value.
 - Technically speaking, this password **CAN** be pretty much anything you decide you want to use.



SQL Alias Manager - 1.1.1.0

Home

New Open Save Set Default New Save Delete

File Accounts

Aeon
Ares
ILLiad
conference
logon (default)

Database Connection

Server kcf-alpha.cloudapp.net

Database Name ConferenceData

Connect Timeout 15

Secure

Username illiad

Password *****

Logon Accounts

XYZ
PDQ

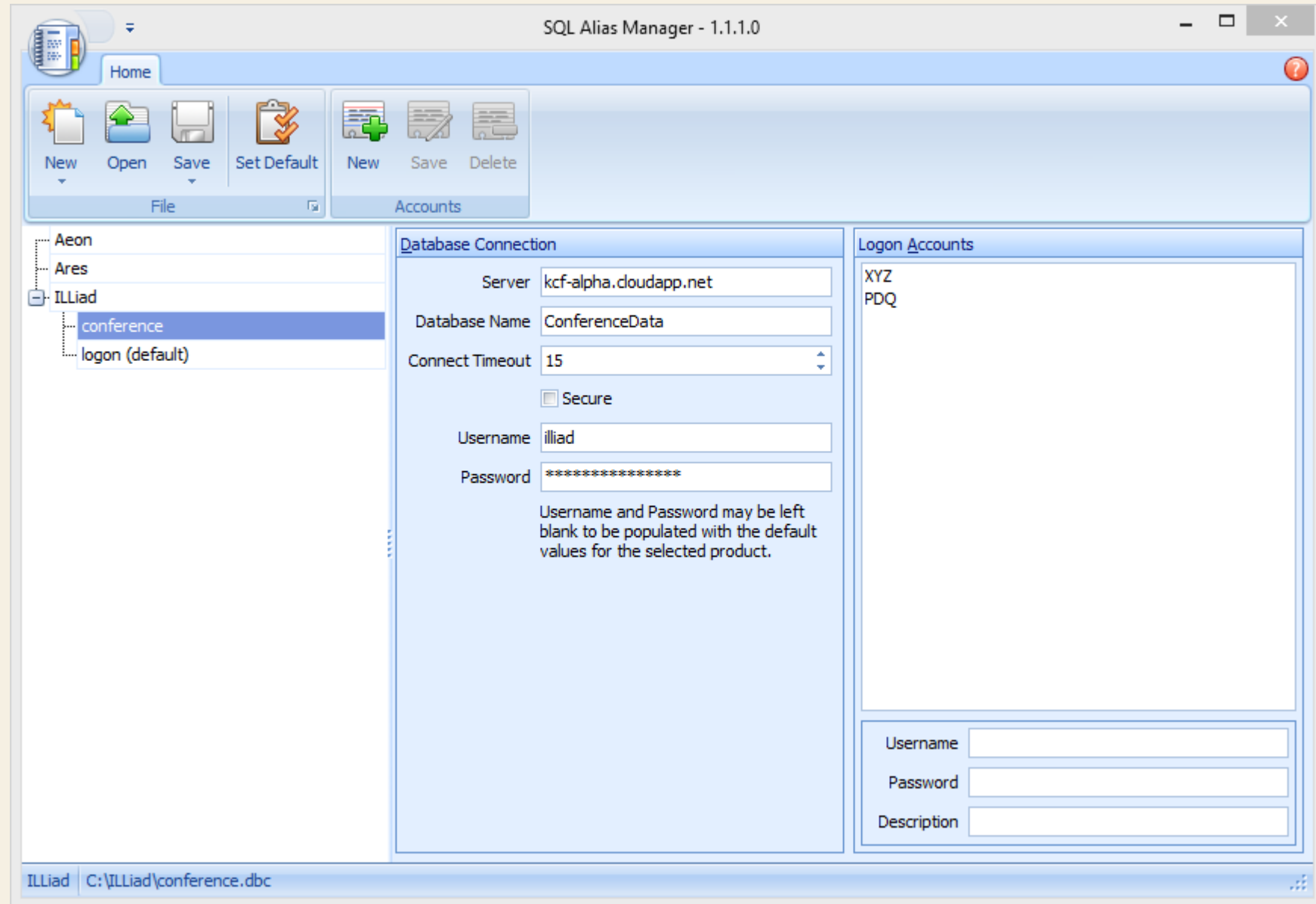
ILLiad C:\ILLiad\conference.dbc

If you do elect to use a non-standard SQL Password for client-database connectivity, just be aware that there's a bit of work involved to set up the SQL Server side of this first:

- Alter the SQL Login to use the appropriate password value.
- Apply any override files/extra .DBF files to enable services/web function with the new Login, etc.
 - **Note: This is not particularly easy to set up, and your SQL Admin(s) would need to be on board with it first.**

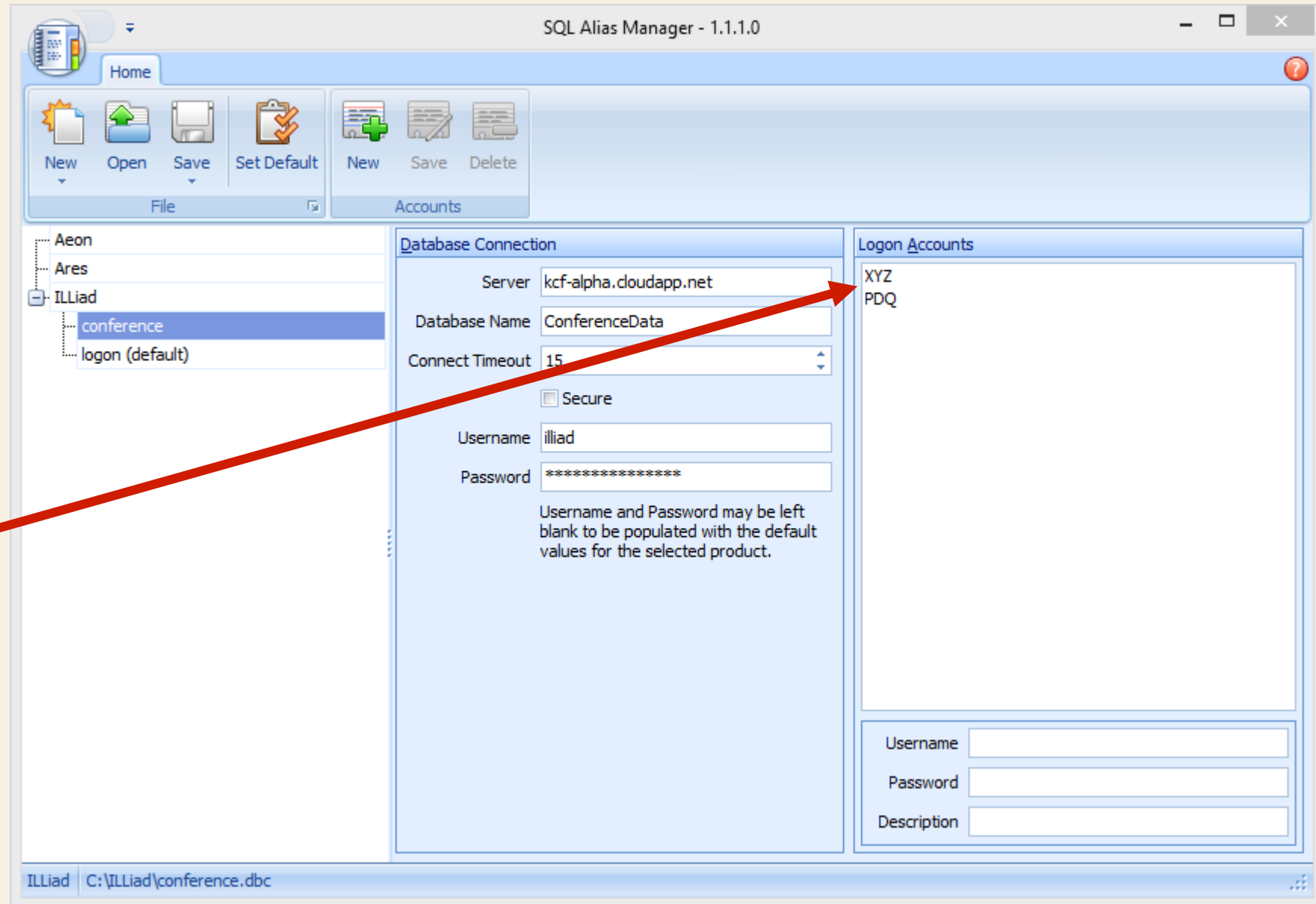
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:



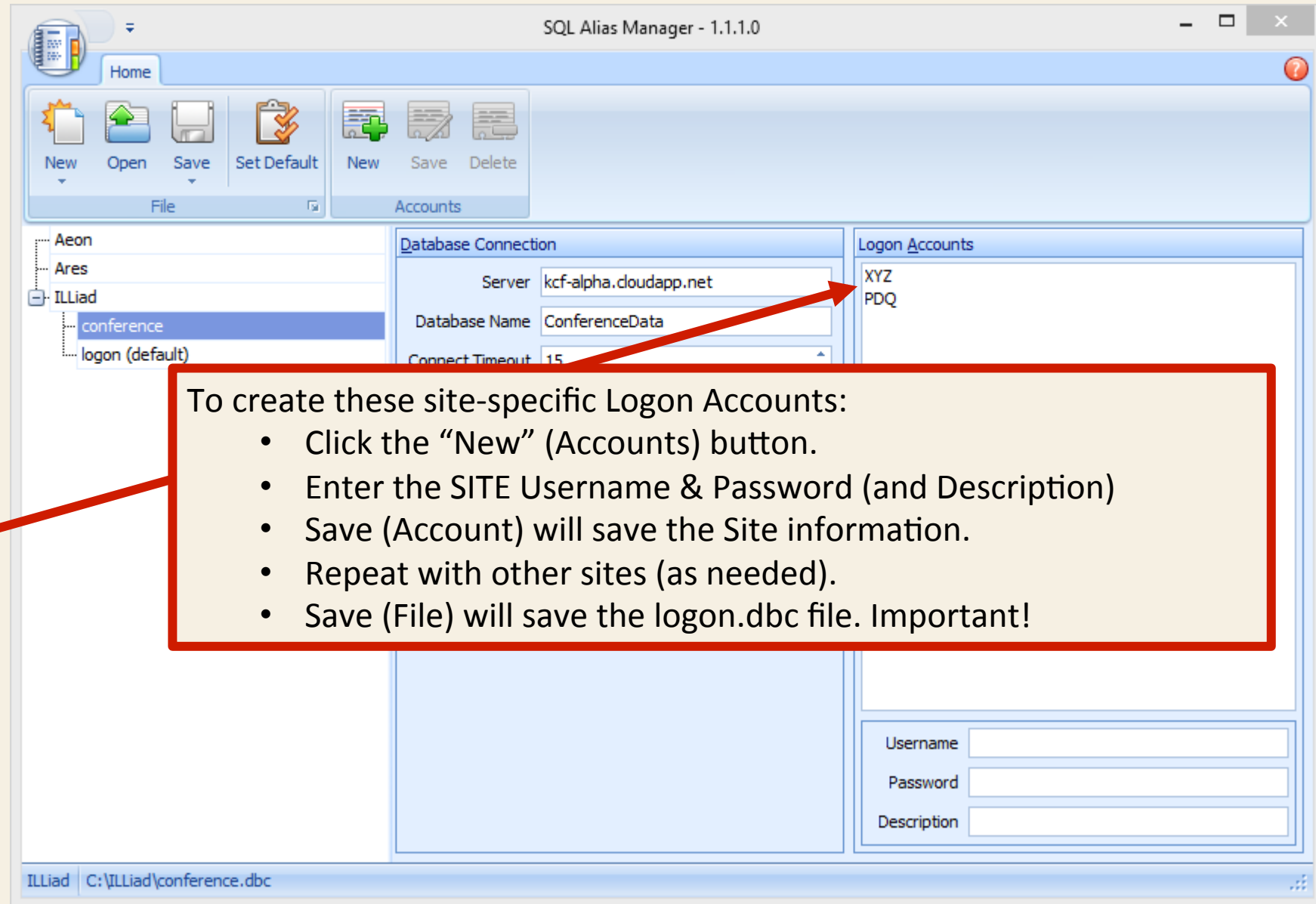
SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - For Multiple Sites/Shared Server ILLiad Systems, Specify the Site Codes and Passwords to be used.



SQL Connectivity Issues:

- Proper SQL Alias Manager (SAM) Configuration:
 - For Multiple Sites/Shared Server ILLiad Systems, Specify the Site Codes and Passwords to be used.



SQL Alias Manager - 1.1.1.0

Home

New Open Save Set Default New Save Delete

File Accounts

Aeon
Ares
ILLiad
 conference
 logon (default)

Database Connection

Server kcf-alpha.cloudapp.net
Database Name ConferenceData
Connect Timeout 15

Logon Accounts

XYZ
PDQ

Username
Password
Description

ILLiad C:\ILLiad\conference.dbc

To create these site-specific Logon Accounts:

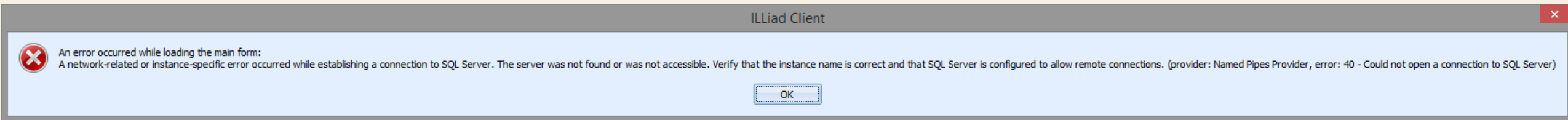
- Click the “New” (Accounts) button.
- Enter the SITE Username & Password (and Description)
- Save (Account) will save the Site information.
- Repeat with other sites (as needed).
- Save (File) will save the logon.dbc file. Important!

SQL Connectivity Issues:

- Example SQL Errors:

SQL Connectivity Issues:

- Example SQL Errors:



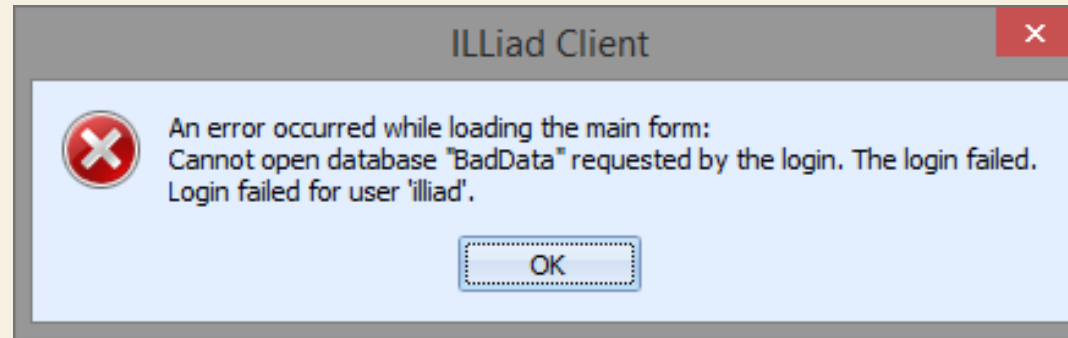
An error occurred while loading the main form:

A network-related or instance-specific error occurred while establishing a connection to SQL Server. The server was not found or was not accessible. Verify that the instance name is correct and that SQL Server is configured to allow remote connections. (provider: Named Pipes Provider, error: 40 – Could not open a connection to SQL Server)

Translation: You can't get there from here.

SQL Connectivity Issues:

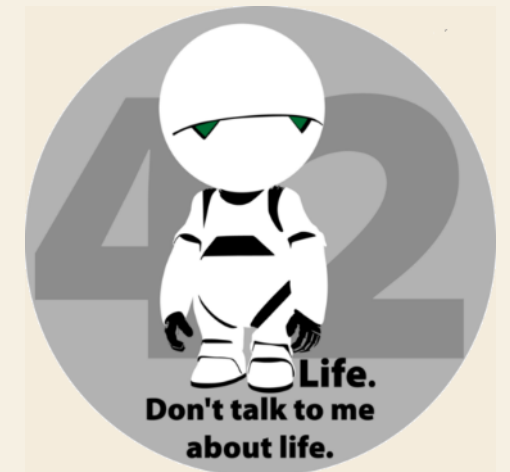
- Example SQL Errors:



An error occurred while loading the main form:
Cannot open Database “BadData” requested by the login. The login failed. Login failed for user “illiad”.

Translation: I connected to SOMETHING, but....

1. Whatever it is, your login doesn't have permission to see it.
2. These aren't the droids you're looking for.



SQL Connectivity Issues:

- Before doing ANYTHING else:
 - Verify that the problem is specific rather than general.
- Does the machine in question have connectivity to other systems, web sites, email, etc.?
- Do SQL connections from OTHER client machines work?
 - **Note: The ILLiad web pages ALSO use a SQL connection to the database , even if it's local to the server. Test that as well.**

SQL Connectivity Issues:

- As a rule, if the problem is general (cannot connect from ANY ILLiad Client), it's typically related to one of the following:
 - The SQL Server/ILLiad database is offline or otherwise inaccessible.
 - Check with your SQL Admin(s).
 - The Network/Firewall is having issues.
 - Check with your Network/Firewall Admin(s).

SQL Connectivity Issues:

- Once you're reasonably convinced that the problem is local/specific, don't ignore the obvious:
 - Reboot the client machine.
 - Check cables/connections as appropriate.
 - Obviously, if everything works except ILLiad, a loose cable probably isn't the issue, but still.....
 - Ports/Network Connectivity

SQL Connectivity Issues:



“Don't you understand that we need to be childish in order to understand? Only a child sees things with perfect clarity, because it hasn't developed all those filters which prevent us from seeing things that we don't expect to see.”

- Douglas Adams

OTHER PORT/NETWORK CONNECTIVITY ISSUES

Other Port/Network Connectivity Issues:

- Ports:
 - SQL Connection Port: **1433** (alt. **1344** for hosted systems)
 - Open outbound from ILLiad Web Server and Client IPs to ILLiad Database Server.
 - Note: **OCLC/Atlas Firewalls for Hosted systems are opened to Specific IP addresses (or ranges), on request.**
 - Public Web Pages Port: **443** (SSL) or **80**
 - Open inbound from ILLiad Web Server to all or any IP ranges that are allowed access to the ILLiad web pages.
 - OCLC Communication Port: **443**
 - Open outbound from ILLiad Web Server and Client IPs to **webservices.oclc.org**.

Other Port/Network Connectivity Issues:

- Ports:
 - ILLiad Update Server (**Passive FTP**)
 - Open outbound from ILLiad Web Server to update.atlas-sys.com.
 - This only needs to be open at the time an ILLiad version update is being applied. Can be closed otherwise.
 - What's the difference between Active and Passive FTP?
 - **Active:** Uses port 21 for the initial connection and port 20 to move the files.
 - **Passive:** Uses port 21 for the initial connection and selects a random port to move the files.
 - Client Updates (No Server Update Required) Port: **80**
 - OCLC Article Exchange Port: **443**
 - Open outbound from ILLiad Web Server to webservices.oclc.org.

Other Port/Network Connectivity Issues:

- Ports:

- Odyssey Communication Port: **7968**

- Server:

- Inbound (for receiving) to the ILLiad Web Server (or to wherever your **Odyssey Manager service** is running).

- From all ILLiad Client Machines.

- From any sites from which you want to receive Odyssey Articles (**usually everywhere**).

- **Note: The Odyssey Manager service will discard anything sent over this port that is not a recognized TIFF or PDF document with an appropriately formatted header.**

- Outbound (for sending) from that same location.

- Client:

- Outbound from any ILLiad Client Machine to the ILLiad Web Server (for Staff Processing).

Other Port/Network Connectivity Issues:

- Optional Ports:
 - Z39.50 Port: **Varies**
 - Contact your Z39.50 Admins for specifics.
 - ISO ILL Port: **1611**
 - Open inbound/outbound from ILLiad Web Server IP to any ISO ILL Sender/Receiver.
 - Innopac PatronAPI Port: **4500**
 - Open outbound from ILLiad Web Server IP to PatronAPI Server.
 - LDAP Port: **389** or **636** (SSL)
 - Open outbound from ILLiad Web Server IP to LDAP server.
 - LDAP Server may also need to be configured to allow authentication.

Other Port/Network Connectivity Issues:

- SMTP:
 - Regardless of how your system's email is set up, your ILLiad Server (System Manager) needs to be able to access the specified SMTP Server using the specified port.
 - Default SMTP Port: **25**
 - Can be any port you set up to work.
- Hosted SMTP:
 - If there are problems connecting to a local SMTP server from a Hosted ILLiad system, Hosted SMTP is possible.

Other Port/Network Connectivity Issues:



“We have normality. I repeat, we have normality. Anything you still can't cope with is therefore your own problem.”

- Douglas Adams

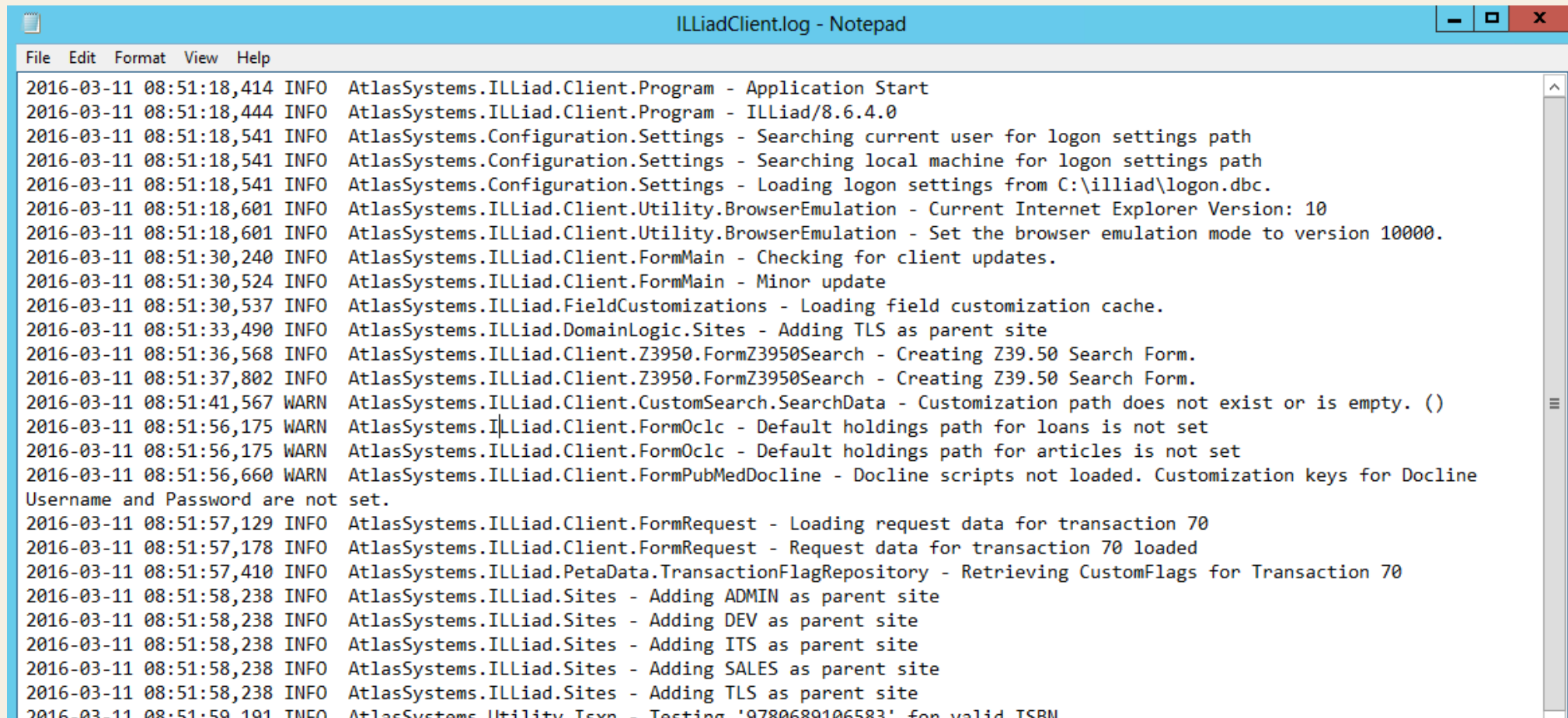
LOGGING

Logging:

- **Client**
 - Local Client Log
 - ILLiad EventLog
- **Customization Manager**
- **Services**
 - Connection Manager
 - ISO Manager
 - ISO Service
 - Odyssey Manager
 - Rapid Manager
 - System Manager
- **Server Updater**
- **Web DLL**
- **Web Platform**

Logging:

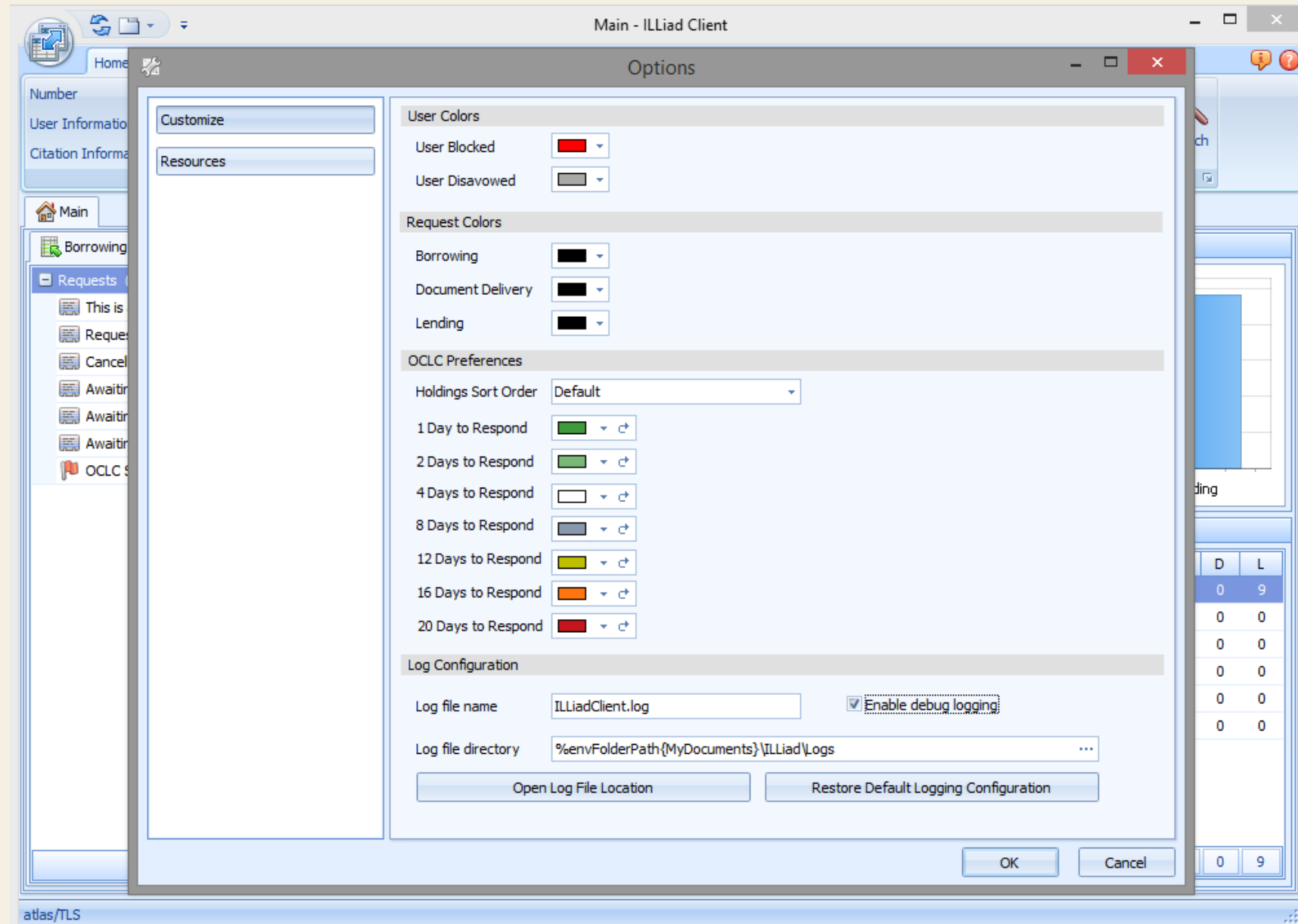
- The ILLiad Client: Local Client Log
 - Scope: Local ILLiad Client Only
 - Location: **C:\Users\<<Windows Username>\Documents\ILLiad\Logs**



```
ILLiadClient.log - Notepad
File Edit Format View Help
2016-03-11 08:51:18,414 INFO AtlasSystems.ILLiad.Client.Program - Application Start
2016-03-11 08:51:18,444 INFO AtlasSystems.ILLiad.Client.Program - ILLiad/8.6.4.0
2016-03-11 08:51:18,541 INFO AtlasSystems.Configuration.Settings - Searching current user for logon settings path
2016-03-11 08:51:18,541 INFO AtlasSystems.Configuration.Settings - Searching local machine for logon settings path
2016-03-11 08:51:18,541 INFO AtlasSystems.Configuration.Settings - Loading logon settings from C:\illiad\logon.dbc.
2016-03-11 08:51:18,601 INFO AtlasSystems.ILLiad.Client.Utility.BrowserEmulation - Current Internet Explorer Version: 10
2016-03-11 08:51:18,601 INFO AtlasSystems.ILLiad.Client.Utility.BrowserEmulation - Set the browser emulation mode to version 10000.
2016-03-11 08:51:30,240 INFO AtlasSystems.ILLiad.Client.FormMain - Checking for client updates.
2016-03-11 08:51:30,524 INFO AtlasSystems.ILLiad.Client.FormMain - Minor update
2016-03-11 08:51:30,537 INFO AtlasSystems.ILLiad.FieldCustomizations - Loading field customization cache.
2016-03-11 08:51:33,490 INFO AtlasSystems.ILLiad.DomainLogic.Sites - Adding TLS as parent site
2016-03-11 08:51:36,568 INFO AtlasSystems.ILLiad.Client.Z3950.FormZ3950Search - Creating Z39.50 Search Form.
2016-03-11 08:51:37,802 INFO AtlasSystems.ILLiad.Client.Z3950.FormZ3950Search - Creating Z39.50 Search Form.
2016-03-11 08:51:41,567 WARN AtlasSystems.ILLiad.Client.CustomSearch.SearchData - Customization path does not exist or is empty. ()
2016-03-11 08:51:56,175 WARN AtlasSystems.ILLiad.Client.FormOclc - Default holdings path for loans is not set
2016-03-11 08:51:56,175 WARN AtlasSystems.ILLiad.Client.FormOclc - Default holdings path for articles is not set
2016-03-11 08:51:56,660 WARN AtlasSystems.ILLiad.Client.FormPubMedDocline - Docline scripts not loaded. Customization keys for Docline
Username and Password are not set.
2016-03-11 08:51:57,129 INFO AtlasSystems.ILLiad.Client.FormRequest - Loading request data for transaction 70
2016-03-11 08:51:57,178 INFO AtlasSystems.ILLiad.Client.FormRequest - Request data for transaction 70 loaded
2016-03-11 08:51:57,410 INFO AtlasSystems.ILLiad.PetaData.TransactionFlagRepository - Retrieving CustomFlags for Transaction 70
2016-03-11 08:51:58,238 INFO AtlasSystems.ILLiad.Sites - Adding ADMIN as parent site
2016-03-11 08:51:58,238 INFO AtlasSystems.ILLiad.Sites - Adding DEV as parent site
2016-03-11 08:51:58,238 INFO AtlasSystems.ILLiad.Sites - Adding ITS as parent site
2016-03-11 08:51:58,238 INFO AtlasSystems.ILLiad.Sites - Adding SALES as parent site
2016-03-11 08:51:58,238 INFO AtlasSystems.ILLiad.Sites - Adding TLS as parent site
2016-03-11 08:51:59,191 INFO AtlasSystems.Utility.Isbn - Testing '9780680106583' for valid ISBN
```

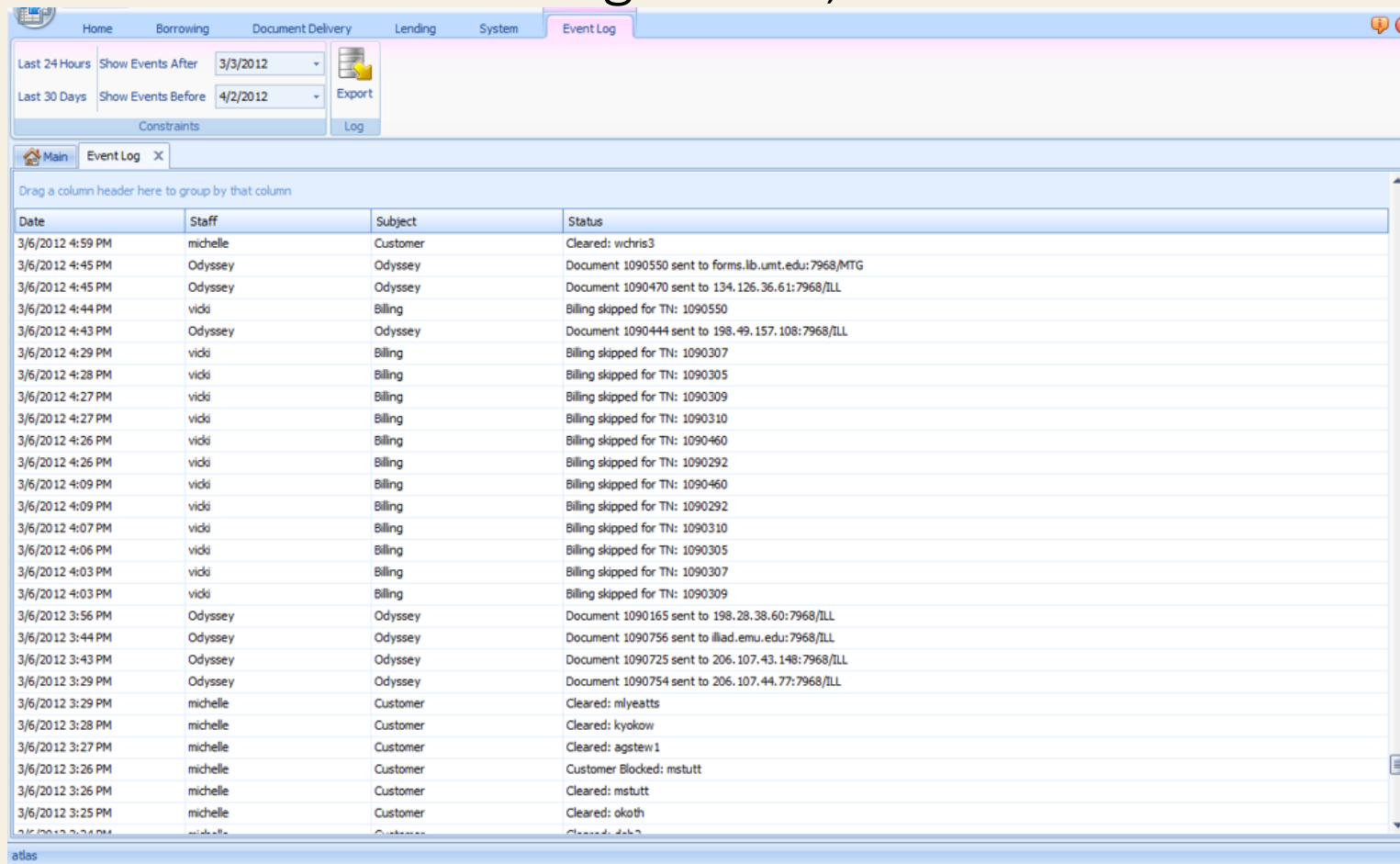
Logging:

- The ILLiad Client:
 - Defaults to Info (basic) level logging.
 - **Set to DEBUG (more verbose) logging from the Options Screen.**



Logging:

- The ILLiad Client: ILLiad EventLog (System Tab – Eventlog)
 - Scope: Local Client plus certain Server side actions.
 - Location: In the Database “Log” Table, Accessed via the client

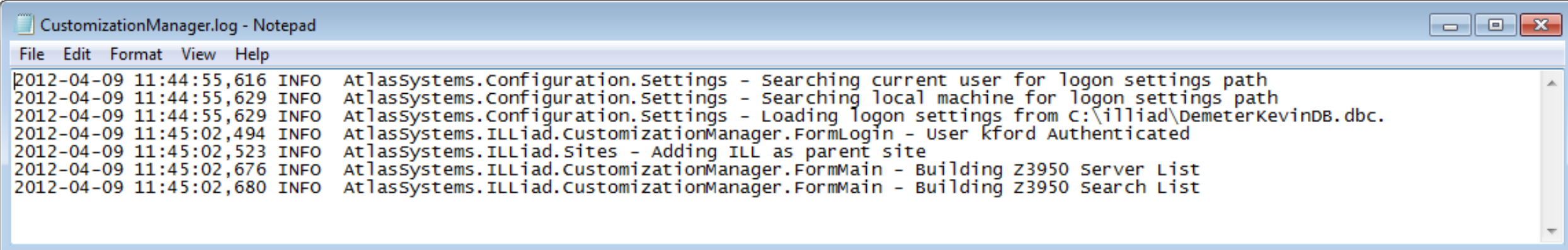


The screenshot displays the ILLiad Event Log interface. At the top, there are navigation tabs: Home, Borrowing, Document Delivery, Lending, System, and Event Log. Below the tabs, there are filters for 'Last 24 Hours' and 'Last 30 Days', along with 'Show Events After' and 'Show Events Before' date pickers. An 'Export' button is also visible. The main area shows a table with the following columns: Date, Staff, Subject, and Status. The table contains a list of events, including document deliveries, billing skips, and customer actions.

Date	Staff	Subject	Status
3/6/2012 4:59 PM	michelle	Customer	Cleared: wchris3
3/6/2012 4:45 PM	Odyssey	Odyssey	Document 1090550 sent to forms.lib.umd.edu:7968/MTG
3/6/2012 4:45 PM	Odyssey	Odyssey	Document 1090470 sent to 134.126.36.61:7968/ILL
3/6/2012 4:44 PM	vidi	Billing	Billing skipped for TN: 1090550
3/6/2012 4:43 PM	Odyssey	Odyssey	Document 1090444 sent to 198.49.157.108:7968/ILL
3/6/2012 4:29 PM	vidi	Billing	Billing skipped for TN: 1090307
3/6/2012 4:28 PM	vidi	Billing	Billing skipped for TN: 1090305
3/6/2012 4:27 PM	vidi	Billing	Billing skipped for TN: 1090309
3/6/2012 4:27 PM	vidi	Billing	Billing skipped for TN: 1090310
3/6/2012 4:26 PM	vidi	Billing	Billing skipped for TN: 1090460
3/6/2012 4:26 PM	vidi	Billing	Billing skipped for TN: 1090292
3/6/2012 4:09 PM	vidi	Billing	Billing skipped for TN: 1090460
3/6/2012 4:09 PM	vidi	Billing	Billing skipped for TN: 1090292
3/6/2012 4:07 PM	vidi	Billing	Billing skipped for TN: 1090310
3/6/2012 4:06 PM	vidi	Billing	Billing skipped for TN: 1090305
3/6/2012 4:03 PM	vidi	Billing	Billing skipped for TN: 1090307
3/6/2012 4:03 PM	vidi	Billing	Billing skipped for TN: 1090309
3/6/2012 3:56 PM	Odyssey	Odyssey	Document 1090165 sent to 198.28.38.60:7968/ILL
3/6/2012 3:44 PM	Odyssey	Odyssey	Document 1090756 sent to illiad.emu.edu:7968/ILL
3/6/2012 3:43 PM	Odyssey	Odyssey	Document 1090725 sent to 206.107.43.148:7968/ILL
3/6/2012 3:29 PM	Odyssey	Odyssey	Document 1090754 sent to 206.107.44.77:7968/ILL
3/6/2012 3:29 PM	michelle	Customer	Cleared: miyeatts
3/6/2012 3:28 PM	michelle	Customer	Cleared: kyokow
3/6/2012 3:27 PM	michelle	Customer	Cleared: agstew 1
3/6/2012 3:26 PM	michelle	Customer	Customer Blocked: mstutt
3/6/2012 3:26 PM	michelle	Customer	Cleared: mstutt
3/6/2012 3:25 PM	michelle	Customer	Cleared: okothe

Logging:

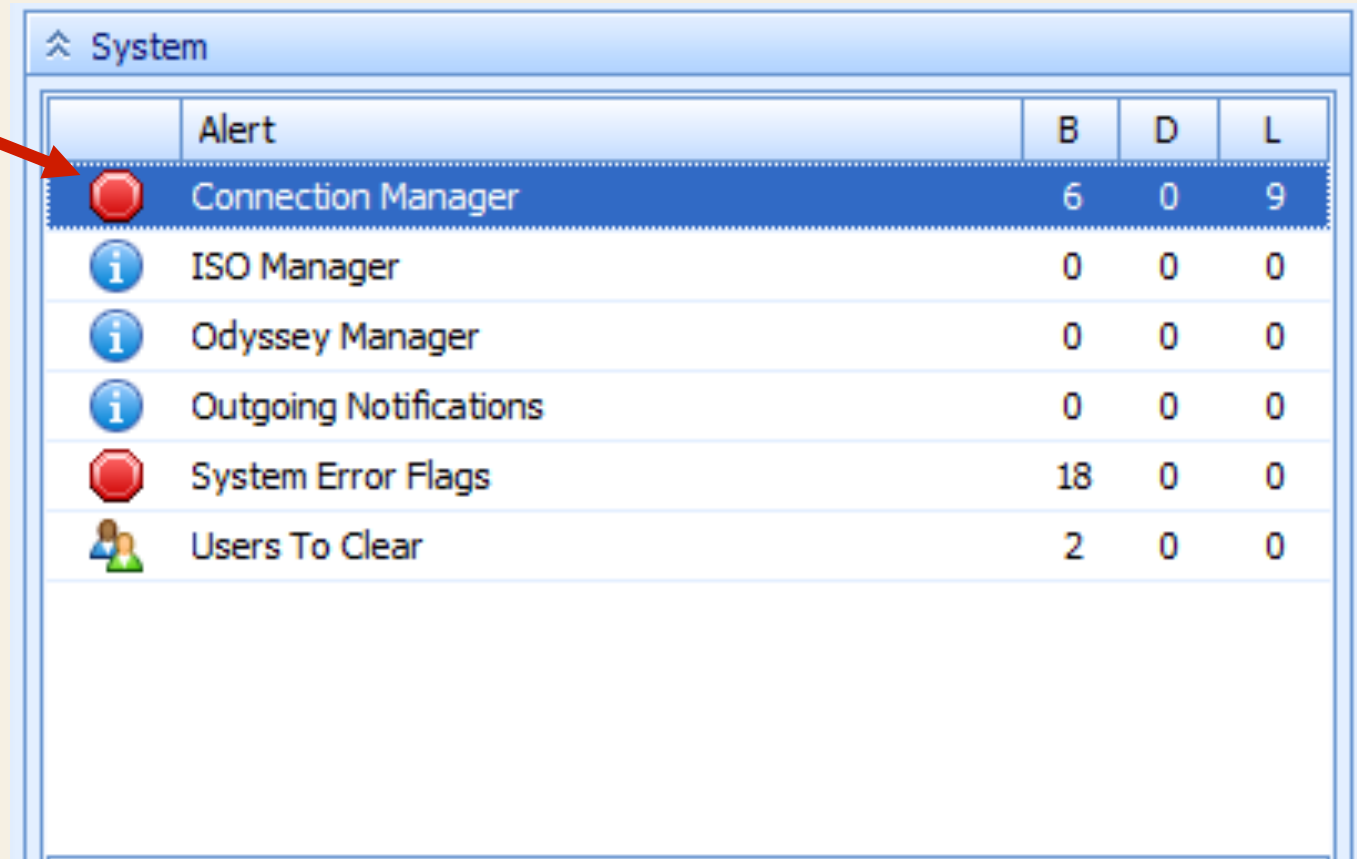
- The ILLiad Customization Manager: Local CM Log
 - Scope: Local ILLiad Customization Manager Only
 - Location: **C:\Users\<<Windows Username>\Documents\ILLiad\Logs**









```
CustomizationManager.log - Notepad
File Edit Format View Help
2012-04-09 11:44:55,616 INFO AtlasSystems.Configuration.Settings - Searching current user for logon settings path
2012-04-09 11:44:55,629 INFO AtlasSystems.Configuration.Settings - Searching local machine for logon settings path
2012-04-09 11:44:55,629 INFO AtlasSystems.Configuration.Settings - Loading logon settings from C:\illiad\DemeterKevinDB.dbc.
2012-04-09 11:45:02,494 INFO AtlasSystems.ILLiad.CustomizationManager.FormLogin - User kford Authenticated
2012-04-09 11:45:02,523 INFO AtlasSystems.ILLiad.Sites - Adding ILL as parent site
2012-04-09 11:45:02,676 INFO AtlasSystems.ILLiad.CustomizationManager.FormMain - Building Z3950 Server List
2012-04-09 11:45:02,680 INFO AtlasSystems.ILLiad.CustomizationManager.FormMain - Building Z3950 Search List
```

Logging:

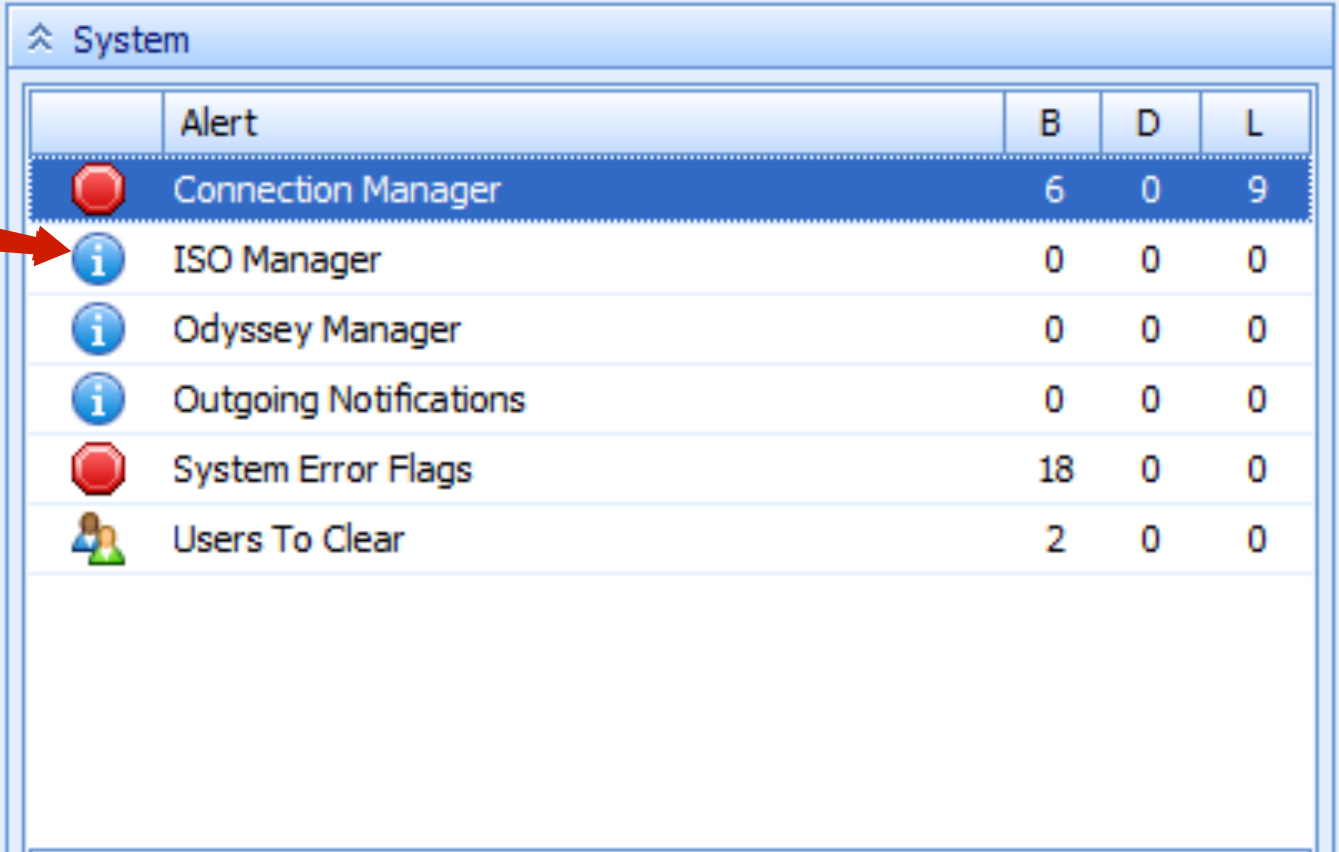
- The ILLiad Services:
 - From within the ILLiad Client Main Menu System Panel:
 - Connection Manager
 - ISO Manager
 - ISO Service
 - Odyssey Manager
 - Rapid Manager
 - System Manager









System		B	D	L
	Alert			
	Connection Manager	6	0	9
	ISO Manager	0	0	0
	Odyssey Manager	0	0	0
	Outgoing Notifications	0	0	0
	System Error Flags	18	0	0
	Users To Clear	2	0	0

Logging:

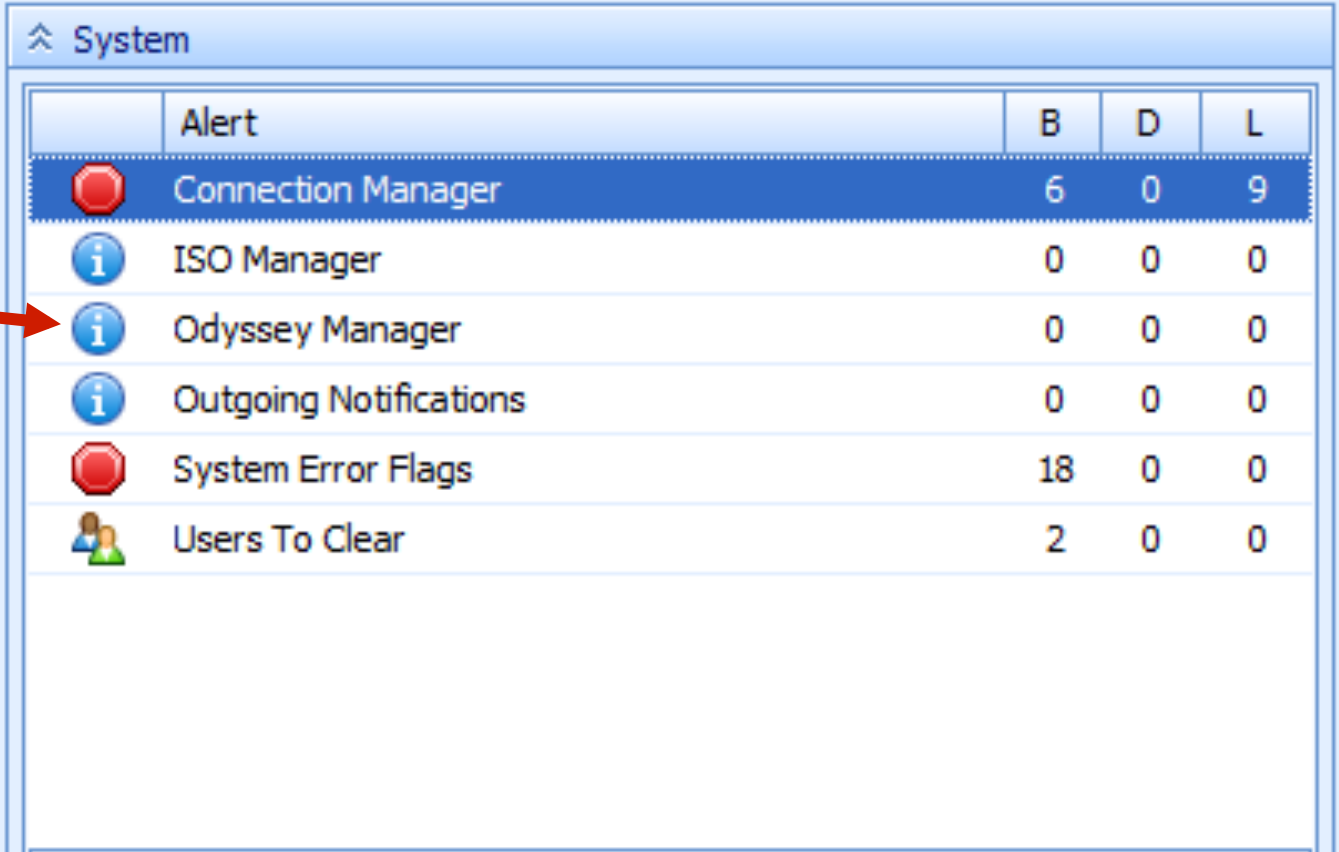
- The ILLiad Services:
 - From within the ILLiad Client Main Menu System Panel:
 - Connection Manager
 - ISO Manager
 - ISO Service
 - Odyssey Manager
 - Rapid Manager
 - System Manager









System				
	Alert	B	D	L
	Connection Manager	6	0	9
	ISO Manager	0	0	0
	Odyssey Manager	0	0	0
	Outgoing Notifications	0	0	0
	System Error Flags	18	0	0
	Users To Clear	2	0	0

Logging:

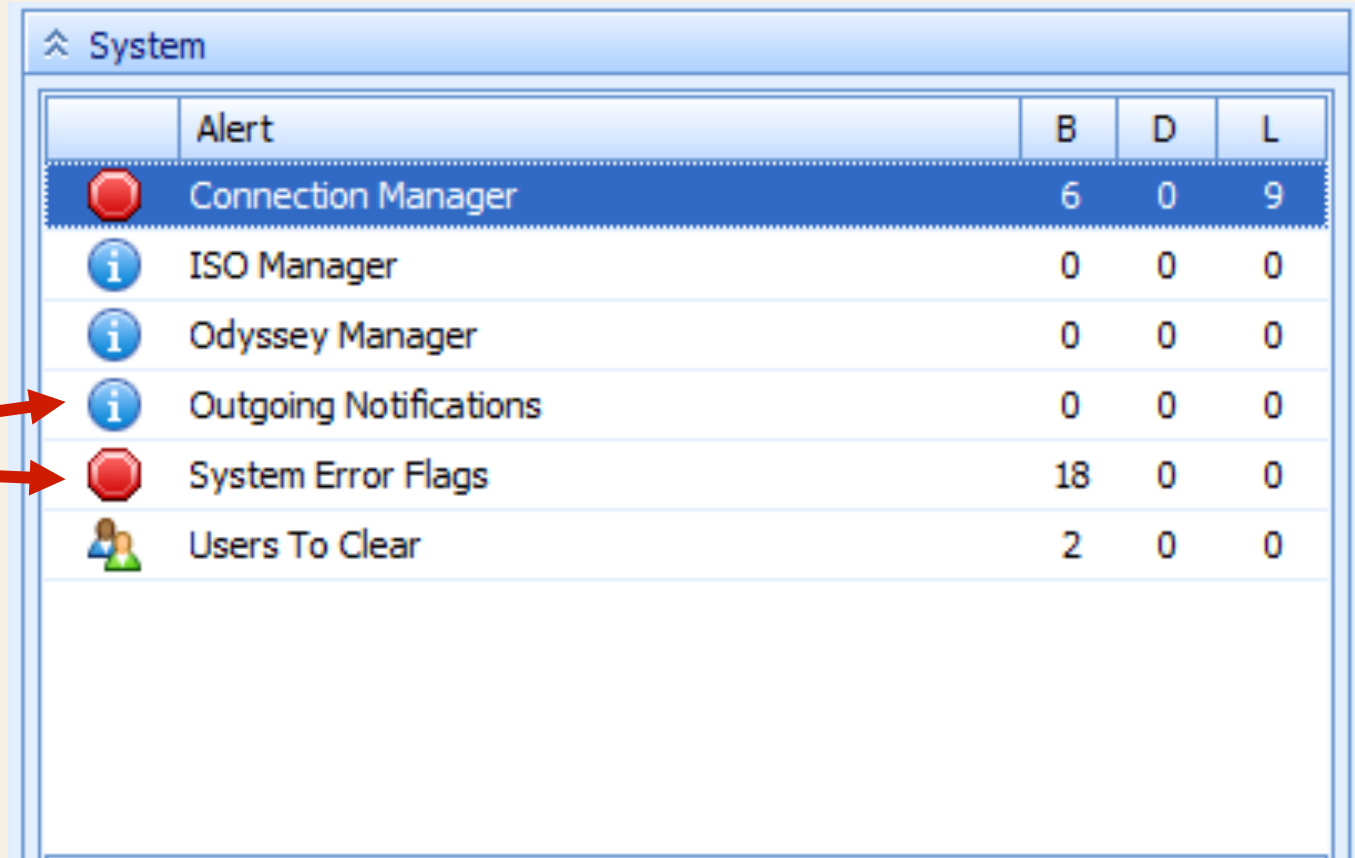
- The ILLiad Services:
 - From within the ILLiad Client Main Menu System Panel:
 - Connection Manager
 - ISO Manager
 - ISO Service
 - Odyssey Manager
 - Rapid Manager
 - System Manager









System		B	D	L
Alert				
	Connection Manager	6	0	9
	ISO Manager	0	0	0
	Odyssey Manager	0	0	0
	Outgoing Notifications	0	0	0
	System Error Flags	18	0	0
	Users To Clear	2	0	0

Logging:

- The ILLiad Services:
 - From within the ILLiad Client Main Menu System Panel:
 - Connection Manager
 - ISO Manager
 - ISO Service
 - Odyssey Manager
 - Rapid Manager
 - System Manager



System		B	D	L
Alert				
	Connection Manager	6	0	9
	ISO Manager	0	0	0
	Odyssey Manager	0	0	0
	Outgoing Notifications	0	0	0
	System Error Flags	18	0	0
	Users To Clear	2	0	0

Logging:

- The ILLiad Services:
 - Log File Configuration - Connection Manager:

X:\illiad\Connection Manager\ConnectionManager.log4d.props

On/OFF Switch



```
#---- begin log4d.props ----  
log4d.debug=TRUE
```

```
log4d.loggerFactory=TLogDefaultLoggerFactory
```

Level



```
# root priority - valid values are 'DEBUG', 'INFO', 'WARN', 'ERROR', 'FATAL'  
log4d.rootLogger=INFO,ROOT
```

```
# root appender
```

```
log4d.appender.ROOT=TLogRollingFileAppender
```

```
log4d.appender.ROOT.append=TRUE
```

```
log4d.appender.ROOT.fileName=C:\illiad\Logs\ConnectionManager.log
```

```
log4d.appender.ROOT.errorHandler=TLogOnlyOnceErrorHandler
```

```
log4d.appender.ROOT.layout=TLogPatternLayout
```

```
log4d.appender.ROOT.layout.dateFormat=yyyy-mm-dd hh:MM:ss,zzz
```

```
log4d.appender.ROOT.layout.pattern=%d [%p] %c (%t) - %m%n
```

```
log4d.appender.ROOT.maxBackupIndex=5
```

```
log4d.appender.ROOT.maxFileSize=1MB
```

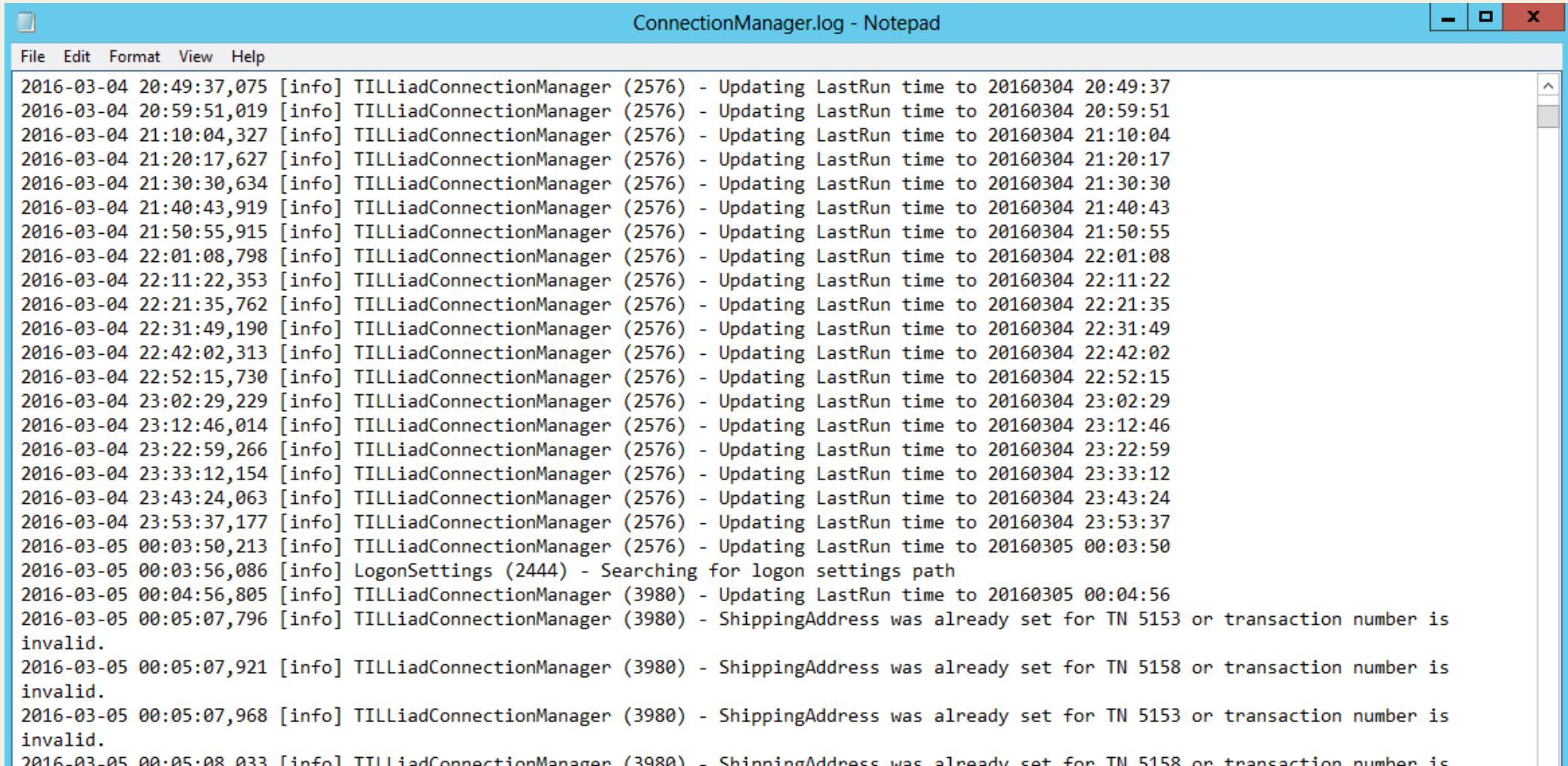
```
#---- end log4d.props ----
```

Location of
Output File



Logging:

- The ILLiad Services:
 - Log File - Connection Manager:



```
ConnectionManager.log - Notepad
File Edit Format View Help
2016-03-04 20:49:37,075 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 20:49:37
2016-03-04 20:59:51,019 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 20:59:51
2016-03-04 21:10:04,327 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 21:10:04
2016-03-04 21:20:17,627 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 21:20:17
2016-03-04 21:30:30,634 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 21:30:30
2016-03-04 21:40:43,919 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 21:40:43
2016-03-04 21:50:55,915 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 21:50:55
2016-03-04 22:01:08,798 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 22:01:08
2016-03-04 22:11:22,353 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 22:11:22
2016-03-04 22:21:35,762 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 22:21:35
2016-03-04 22:31:49,190 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 22:31:49
2016-03-04 22:42:02,313 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 22:42:02
2016-03-04 22:52:15,730 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 22:52:15
2016-03-04 23:02:29,229 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 23:02:29
2016-03-04 23:12:46,014 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 23:12:46
2016-03-04 23:22:59,266 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 23:22:59
2016-03-04 23:33:12,154 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 23:33:12
2016-03-04 23:43:24,063 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 23:43:24
2016-03-04 23:53:37,177 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160304 23:53:37
2016-03-05 00:03:50,213 [info] TILLiadConnectionManager (2576) - Updating LastRun time to 20160305 00:03:50
2016-03-05 00:03:56,086 [info] LogonSettings (2444) - Searching for logon settings path
2016-03-05 00:04:56,805 [info] TILLiadConnectionManager (3980) - Updating LastRun time to 20160305 00:04:56
2016-03-05 00:05:07,796 [info] TILLiadConnectionManager (3980) - ShippingAddress was already set for TN 5153 or transaction number is
invalid.
2016-03-05 00:05:07,921 [info] TILLiadConnectionManager (3980) - ShippingAddress was already set for TN 5158 or transaction number is
invalid.
2016-03-05 00:05:07,968 [info] TILLiadConnectionManager (3980) - ShippingAddress was already set for TN 5153 or transaction number is
invalid.
2016-03-05 00:05:08,033 [info] TILLiadConnectionManager (3980) - ShippingAddress was already set for TN 5158 or transaction number is
```

Logging:

- The ILLiad Services:
 - Log File Configuration – Odyssey Manager:

X:\illiad\Odyssey\OdysseyManager.log4d.props

On/OFF Switch



```
#---- begin log4d.props ----  
log4d.debug=TRUE
```

```
log4d.loggerFactory=TLogDefaultLoggerFactory
```

Level



```
# root priority - valid values are 'DEBUG', 'INFO', 'WARN', 'ERROR', 'FATAL'  
log4d.rootLogger=INFO,ROOT
```

```
# root appender
```

```
log4d.appender.ROOT=TLogRollingFileAppender
```

```
log4d.appender.ROOT.append=TRUE
```

```
log4d.appender.ROOT.fileName=C:\illiad\Logs\Odyssey.log
```

```
log4d.appender.ROOT.errorHandler=TLogOnlyOnceErrorHandler
```

```
log4d.appender.ROOT.layout=TLogPatternLayout
```

```
log4d.appender.ROOT.layout.dateFormat=yyyy-mm-dd hh:MM:ss,zzz
```

```
log4d.appender.ROOT.layout.pattern=%d [%p] %c (%t) - %m%n
```

```
log4d.appender.ROOT.maxBackupIndex=5
```

```
log4d.appender.ROOT.maxFileSize=1MB
```

```
#---- end log4d.props ----
```

Location of
Output File



Logging:

- The ILLiad Services:
 - Log File Configuration – Rapid Manager:

X:\illiad\Rapid Manager\RapidManager.log.config

Level



```
<?xml version="1.0" encoding="utf-8"?>
<log4net>
  <root>
    <level value="INFO" />
    <appender-ref ref="RollingFile" />
  </root>

  <appender name="RollingFile" type="log4net.Appender.RollingFileAppender">
    <file value="C:\ILLiad\Logs\RapidManager.log" />
    <appendToFile value="true" />
    <maximumFileSize value="1MB" />
    <maxSizeRollBackups value="5" />
    <rollingStyle value="Size" />
    <staticLogFileName value="true" />
    <preserveLogFileNameExtension value="true" />

    <layout type="log4net.Layout.PatternLayout">
      <conversionPattern value="%date [%thread] %-5level %logger - %message%newline%exception"/>
    </layout>
  </appender>
</log4net>
```

Location of
Output File



Logging:

- The ILLiad Services:
 - Log File Configuration – System Manager:

X:\illiad\System Manager\ILLiadSystemManager.log.config

Level



```
<?xml version="1.0" encoding="utf-8"?>
<log4net>
  <root>
    <level value="INFO" />
    <appender-ref ref="RollingFile" />
  </root>

  <appender name="RollingFile" type="log4net.Appender.RollingFileAppender">
    <file value="C:\ILLiad\Logs\SystemManager.log" />
    <appendToFile value="true" />
    <maximumFileSize value="1MB" />
    <maxSizeRollBackups value="5" />
    <rollingStyle value="Size" />
    <staticLogFileName value="true" />
    <preserveLogFileNameExtension value="true" />

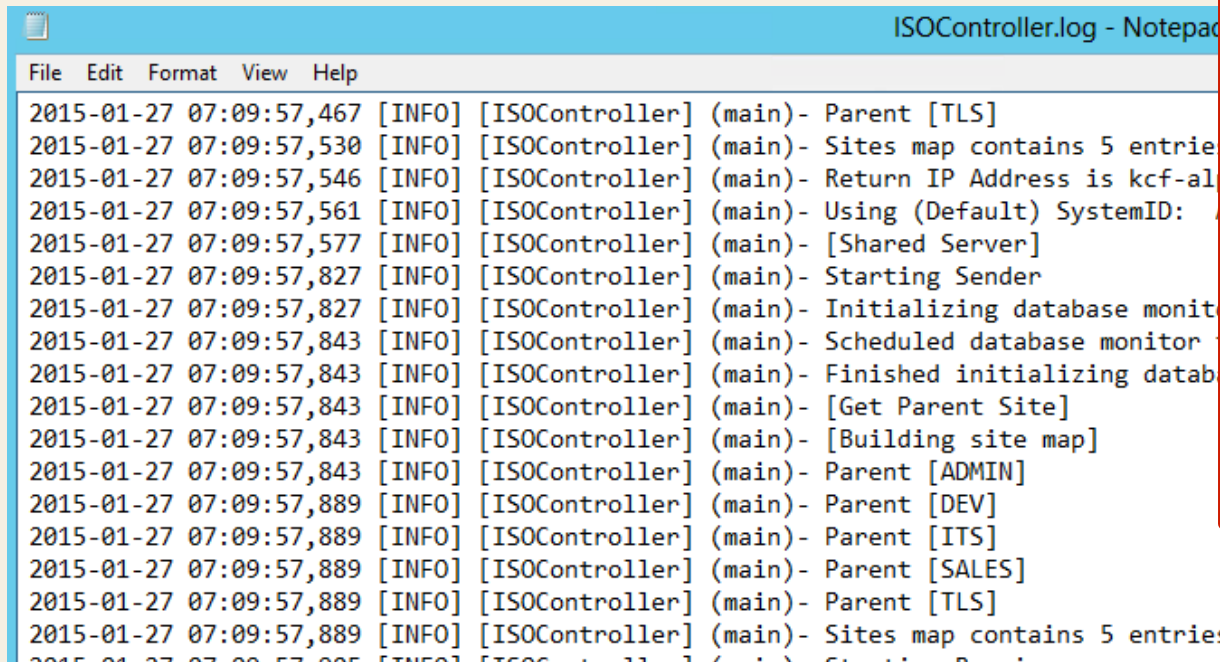
    <layout type="log4net.Layout.PatternLayout">
      <conversionPattern value="%date [%thread] %-5level %logger - %message%newline%exception"/>
    </layout>
  </appender>
</log4net>
```

Location of
Output File



Logging:

- The ILLiad Services:
 - ISO ILL:
 - 3 Different Log files located in `X:\illiad\ISO\logs\`:
 - IsoController Log
 - ****9 times out of 10, this is the important one.**
 - Jdbc Log
 - Network Log



```
ISOController.log - Notepad
File Edit Format View Help
2015-01-27 07:09:57,467 [INFO] [ISOController] (main)- Parent [TLS]
2015-01-27 07:09:57,530 [INFO] [ISOController] (main)- Sites map contains 5 entries
2015-01-27 07:09:57,546 [INFO] [ISOController] (main)- Return IP Address is kcf-al
2015-01-27 07:09:57,561 [INFO] [ISOController] (main)- Using (Default) SystemID:
2015-01-27 07:09:57,577 [INFO] [ISOController] (main)- [Shared Server]
2015-01-27 07:09:57,827 [INFO] [ISOController] (main)- Starting Sender
2015-01-27 07:09:57,827 [INFO] [ISOController] (main)- Initializing database monitor
2015-01-27 07:09:57,843 [INFO] [ISOController] (main)- Scheduled database monitor
2015-01-27 07:09:57,843 [INFO] [ISOController] (main)- Finished initializing datab
2015-01-27 07:09:57,843 [INFO] [ISOController] (main)- [Get Parent Site]
2015-01-27 07:09:57,843 [INFO] [ISOController] (main)- [Building site map]
2015-01-27 07:09:57,843 [INFO] [ISOController] (main)- Parent [ADMIN]
2015-01-27 07:09:57,889 [INFO] [ISOController] (main)- Parent [DEV]
2015-01-27 07:09:57,889 [INFO] [ISOController] (main)- Parent [ITS]
2015-01-27 07:09:57,889 [INFO] [ISOController] (main)- Parent [SALES]
2015-01-27 07:09:57,889 [INFO] [ISOController] (main)- Parent [TLS]
2015-01-27 07:09:57,889 [INFO] [ISOController] (main)- Sites map contains 5 entries
```

Helpful Hint:

ISO ILL is what I typically refer to as a “Send and Pray” protocol.

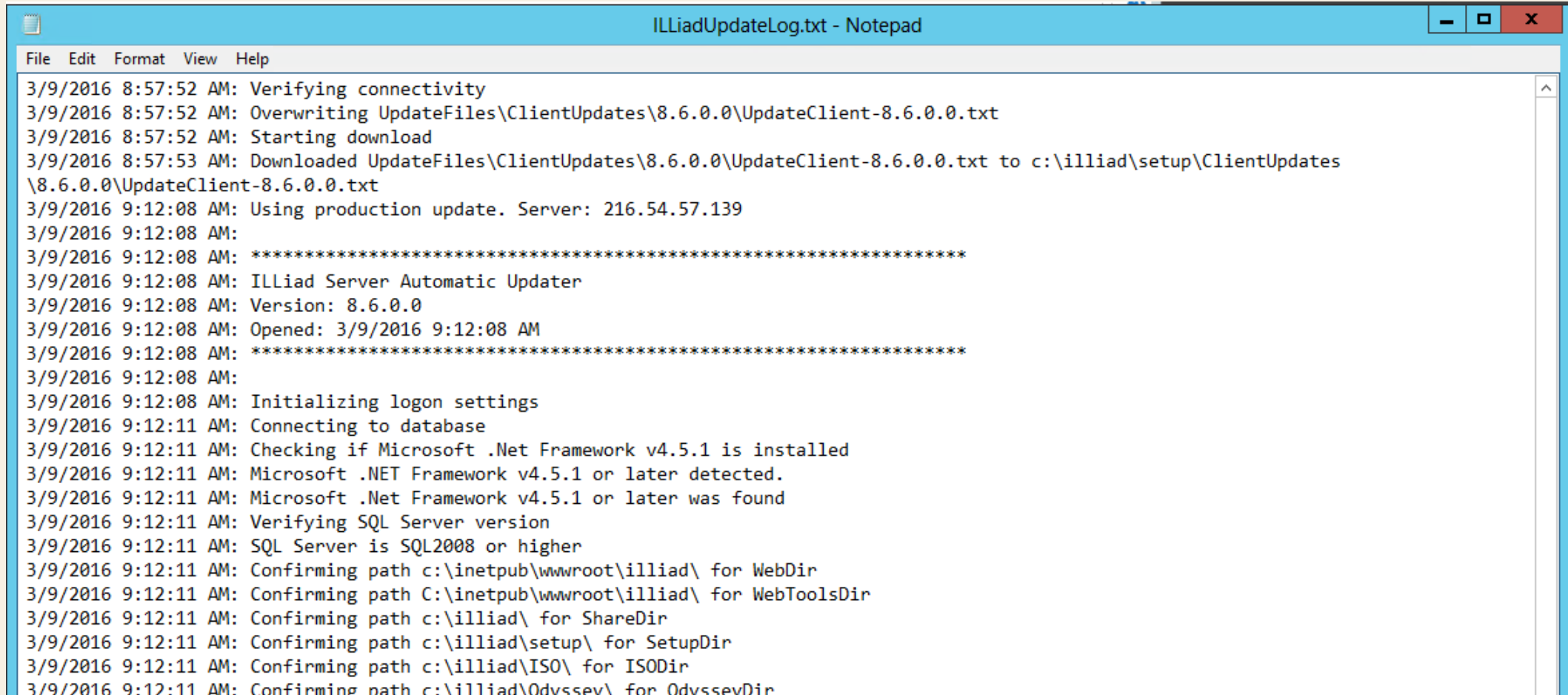
Although it MAY send ISO ILL information correctly from your end, there is NO confirmation check that anything was ever received on the other end.

Note: This is a limitation of the protocol, not anything ILLiad specific.

IOW – Just because it’s working on your end and no errors are received, doesn’t mean it’s actually working between any two sites.

Logging:

- The ILLiad Server Updater:
 - Logs in the same location as the ILLiadUpdate.exe.
 - Usually **C:\illiad\Admin\ILLiadUpdateLog.txt**



The screenshot shows a Notepad window titled "ILLiadUpdateLog.txt - Notepad". The window contains a log of system events from the ILLiad Server Automatic Updater. The log entries are as follows:

```
3/9/2016 8:57:52 AM: Verifying connectivity
3/9/2016 8:57:52 AM: Overwriting UpdateFiles\ClientUpdates\8.6.0.0\UpdateClient-8.6.0.0.txt
3/9/2016 8:57:52 AM: Starting download
3/9/2016 8:57:53 AM: Downloaded UpdateFiles\ClientUpdates\8.6.0.0\UpdateClient-8.6.0.0.txt to c:\illiad\setup\ClientUpdates
\8.6.0.0\UpdateClient-8.6.0.0.txt
3/9/2016 9:12:08 AM: Using production update. Server: 216.54.57.139
3/9/2016 9:12:08 AM:
3/9/2016 9:12:08 AM: *****
3/9/2016 9:12:08 AM: ILLiad Server Automatic Updater
3/9/2016 9:12:08 AM: Version: 8.6.0.0
3/9/2016 9:12:08 AM: Opened: 3/9/2016 9:12:08 AM
3/9/2016 9:12:08 AM: *****
3/9/2016 9:12:08 AM:
3/9/2016 9:12:08 AM: Initializing logon settings
3/9/2016 9:12:11 AM: Connecting to database
3/9/2016 9:12:11 AM: Checking if Microsoft .Net Framework v4.5.1 is installed
3/9/2016 9:12:11 AM: Microsoft .NET Framework v4.5.1 or later detected.
3/9/2016 9:12:11 AM: Microsoft .Net Framework v4.5.1 or later was found
3/9/2016 9:12:11 AM: Verifying SQL Server version
3/9/2016 9:12:11 AM: SQL Server is SQL2008 or higher
3/9/2016 9:12:11 AM: Confirming path c:\inetpub\wwwroot\illiad\ for WebDir
3/9/2016 9:12:11 AM: Confirming path C:\inetpub\wwwroot\illiad\ for WebToolsDir
3/9/2016 9:12:11 AM: Confirming path c:\illiad\ for ShareDir
3/9/2016 9:12:11 AM: Confirming path c:\illiad\setup\ for SetupDir
3/9/2016 9:12:11 AM: Confirming path c:\illiad\ISO\ for ISODir
3/9/2016 9:12:11 AM: Confirming path c:\illiad\Odvssev\ for OdvssevDir
```


Logging:

- The ILLiad Web DLLs:
 - Each ILLiad Web folder (regardless of location) should have it's own **log4d.props** configuration file for DLL logging.

```
#---- begin log4d.props ----
log4d.debug=TRUE

log4d.categoryFactory=TLogDefaultCategoryFactory

# root priority - valid values are 'DEBUG', 'INFO', 'WARN', 'ERROR', 'FATAL'
log4d.rootCategory=DEBUG,ROOT

# root appender
log4d.appender.ROOT=TLogFileAppender
log4d.appender.ROOT.append=TRUE
log4d.appender.ROOT.fileName=c:\illiad\dll\ILLiadDLL.log
log4d.appender.ROOT.errorHandler=TLogOnlyOnceErrorHandler
log4d.appender.ROOT.layout=TLogPatternLayout
log4d.appender.ROOT.layout.dateFormat=yyyy-mm-dd hh:MM:ss,zzz
log4d.appender.ROOT.layout.pattern=%d [%p] %c %t - %m%n
#---- end log4d.props ----
```

***Troubleshooting Tip:

If you set up each Web DLL/Directory in advance to create a log with a unique filename, you'll never need to worry about which DLL is writing to which log file.

This is especially useful for multi-site systems and systems with complicated web structures due to authentication needs.

Logging:

- The ILLiad WebPlatform:

X:\illiad\WebPlatform\App_Data\ILLiadWebPlatform.log.config


Level



```
<?xml version="1.0" encoding="utf-8"?>
<log4net>
  <root>
    <level value="INFO" />
    <appender-ref ref="RollingFile" />
  </root>

  <appender name="RollingFile" type="log4net.Appender.RollingFileAppender">
    <file type="log4net.Util.PatternString" value="C:\ILLiad\Logs\ILLiadWebPlatform.log" />
    <appendToFile value="true" />
    <maximumFileSize value="1MB" />
    <maxSizeRollBackups value="5" />
    <rollingStyle value="Size" />
    <staticLogFileName value="true" />
    <preserveLogFileNameExtension value="true" />

    <layout type="log4net.Layout.PatternLayout">
      <conversionPattern value="%date [%thread] %-5level %logger - %message (Request ID: %aspnet-
context{RequestIdentity})%newline%exception" />
    </layout>
  </appender>
</log4net>
```



Logging:

- The ILLiad WebPlatform:

- Troubleshooting Tip:

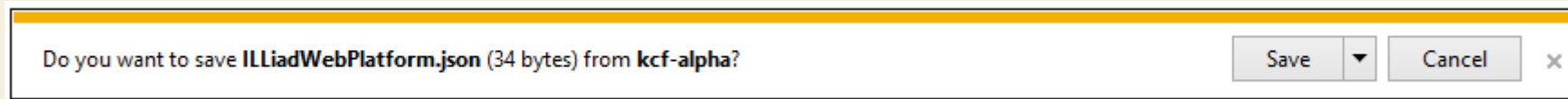
- If you're simply trying to verify whether or not the ILLiad WebPlatform is set up correctly and accessible, simply open up a browser and go to:

- <https://<ILLiad Server DNS Name>/ILLiadWebPlatform/>

- If you see this sort of result in Chrome or Firefox, it's working:



- And if you're using IE and you get prompted to download a file, it's working.



- FYI – What you want there is the prompt. Don't actually download the file.

Logging:

- Going Hard Core:
 - **Windows Event Viewer**
 - Just about anything done on the server or workstation is tracked in here somewhere.

The screenshot shows the Windows Event Viewer interface within the Computer Management console. The left-hand tree view is expanded to 'Event Viewer' > 'Windows Logs' > 'Application'. The main pane displays an 'Overview and Summary' section with a table of administrative events. Below this is a 'Recently Viewed Nodes' table and a 'Log Summary' table.

Summary of Administrative Events

Event Type	Event ID	Source	Log	Last hour	24 hours
Critical	-	-	-	0	0
Error	-	-	-	0	6
Warning	-	-	-	0	0

Recently Viewed Nodes

Name	Description	Modified	Created
Saved Logs\Event files		N/A	N/A

Log Summary

Log Name	Size (Curr...)	Modified	Enabled	Retention Polic
Application	20.00 MB/...	4/3/2012 8:02:03 AM	Enabled	Overwrite ever
Hardware Events	68 KB/20 ...	9/3/2009 3:30:28 PM	Enabled	Overwrite ever
Internet Explorer	68 KB/1.0...	9/3/2009 3:30:28 PM	Enabled	Overwrite ever

Logging:

- Going Hard Core:
 - **SQL Server Profiler**
 - Everything done On the SQL Server is tracked here somewhere.

EventClass	TextData	ApplicationName	NTUserName	LoginName	CPU	Reads	Writes	Duration	ClientProcessID
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Customization WHERE CustKey = N'DirectRe...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Customization WHERE CustKey = N'DirectRe...	ILLiad		illiad	0	5	0	0	58
SQL:BatchStarting	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Customization WHERE CustKey = N'DirectRe...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Customization WHERE CustKey = N'DirectRe...	ILLiad		illiad	0	5	0	0	58
SQL:BatchStarting	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Transactions t, Users u WHERE ...	ILLiad		illiad	0	13	0	0	58
SQL:BatchStarting	SELECT * FROM Customization WHERE CustKey = N'DirectRe...	ILLiad		illiad					58
SQL:BatchCompleted	SELECT * FROM Customization WHERE CustKey = N'DirectRe...	ILLiad		illiad	0	5	0	0	58

```
SELECT
FROM
Transactions t, Users u
WHERE
t.Username = u.Username
AND t.TransactionStatus = N'Awaiting Direct Request Lenders'
AND u.NVTGC IN (SELECT DISTINCT NVTGC FROM [DEV].Users)
```

Trace is stopped. Ln 154, Col 2 Rows: 261 Connections: 0

Logging:



“For a moment, nothing happened. Then, after a second or so, nothing continued to happen.”

- Douglas Adams

WEB PAGE ISSUES

Web Page Issues:

- Macro Issues (overall functionality)
 - Ports
 - Permissions
 - The WebPath Key
 - WebPath.txt

Web Page Issues:

- Ports

- Web Pages: **80/443**

- Inbound to the web server from any IP

- 80 for standard web

- 443 for secure web/SSL

- Note: In the current version, SSL Port 443 is **REQUIRED** for the ILLiad Web Platform to function properly.

Web Page Issues:

- Permissions
 - The Anonymous User Accounts
 - Windows 2008 Server and newer:
 - IUSR
 - IIS_IUSRS
 - Before Windows 2008 Server:
 - Usually IUSR_SERVERNAME
 - Possible to be other specified accounts

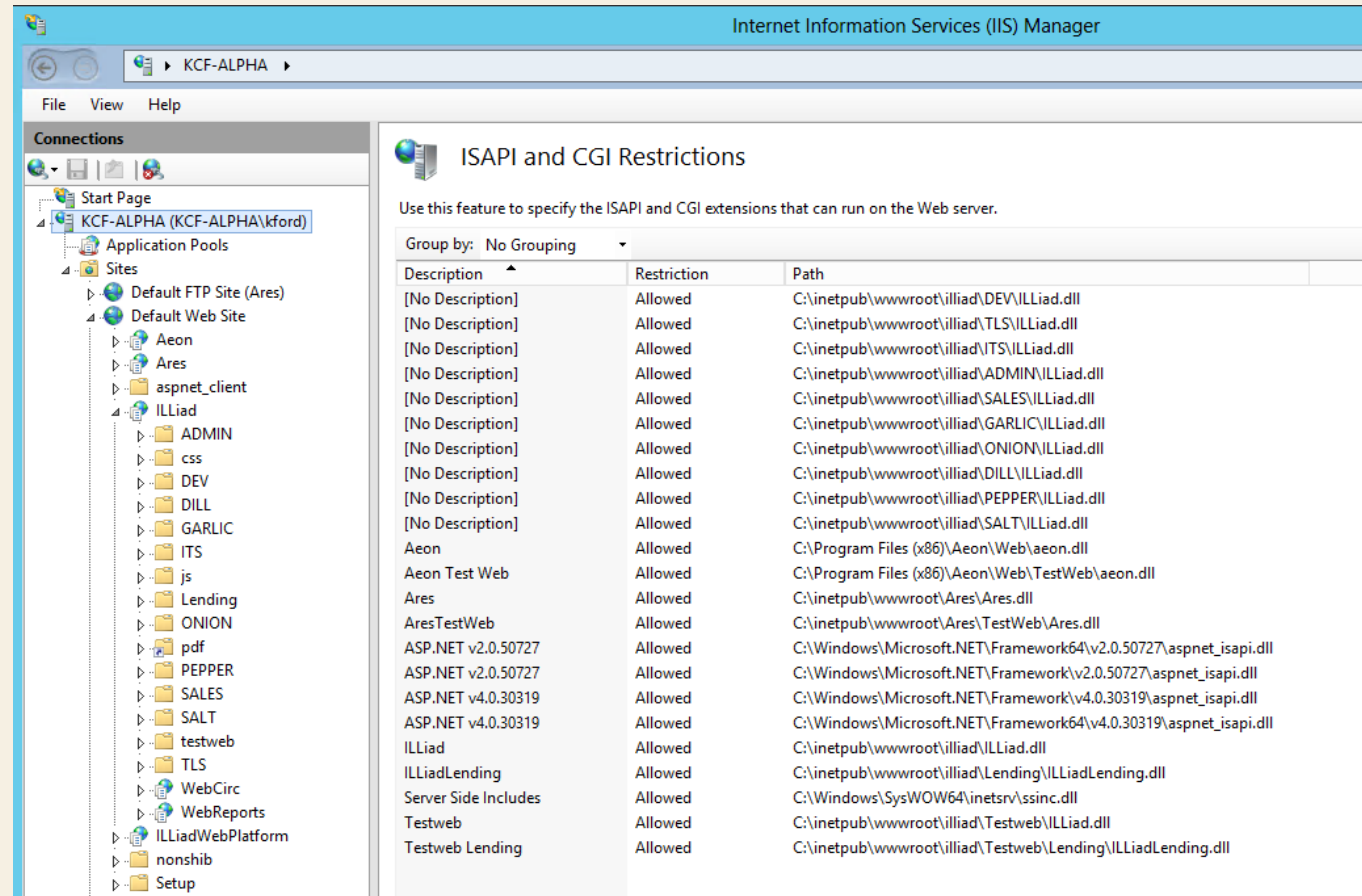
Please tell me no one is running ILLiad on anything earlier than Windows Server 2008.

But if you are and you're too embarrassed to admit it in a group setting, you may want to investigate migrating your system to a newer server.

Yesterday.

Web Page Issues:

- Allowed Extensions
 - Illiad.dll
 - Illiadlending.dll
- Set in the IIS “ISAPI and CGI Restrictions” and “Handler Mappings” settings.
- Don’t forget to enable the ILLiad TestWeb .DLLs as well.



The screenshot shows the Internet Information Services (IIS) Manager interface. The left pane displays the site structure for 'KCF-ALPHA (KCF-ALPHA\kford)', including 'Application Pools' and 'Sites'. The right pane is titled 'ISAPI and CGI Restrictions' and contains a table of allowed extensions.

ISAPI and CGI Restrictions

Use this feature to specify the ISAPI and CGI extensions that can run on the Web server.

Group by: No Grouping

Description	Restriction	Path
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\DEV\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\TLS\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\ITS\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\ADMIN\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\SALES\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\GARLIC\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\ONION\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\DILL\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\PEPPER\ILLiad.dll
[No Description]	Allowed	C:\inetpub\wwwroot\illiad\SALT\ILLiad.dll
Aeon	Allowed	C:\Program Files (x86)\Aeon\Web\aeon.dll
Aeon Test Web	Allowed	C:\Program Files (x86)\Aeon\Web\TestWeb\aeon.dll
Ares	Allowed	C:\inetpub\wwwroot\Ares\Ares.dll
AresTestWeb	Allowed	C:\inetpub\wwwroot\Ares\TestWeb\Ares.dll
ASP.NET v2.0.50727	Allowed	C:\Windows\Microsoft.NET\Framework64\v2.0.50727\aspnet_isapi.dll
ASP.NET v2.0.50727	Allowed	C:\Windows\Microsoft.NET\Framework\v2.0.50727\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	C:\Windows\Microsoft.NET\Framework\v4.0.30319\aspnet_isapi.dll
ASP.NET v4.0.30319	Allowed	C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet_isapi.dll
ILLiad	Allowed	C:\inetpub\wwwroot\illiad\ILLiad.dll
ILLiadLending	Allowed	C:\inetpub\wwwroot\illiad\Lending\ILLiadLending.dll
Server Side Includes	Allowed	C:\Windows\SysWOW64\inetsrv\ssinc.dll
Testweb	Allowed	C:\inetpub\wwwroot\illiad\Testweb\ILLiad.dll
Testweb Lending	Allowed	C:\inetpub\wwwroot\illiad\Testweb\Lending\ILLiadLending.dll

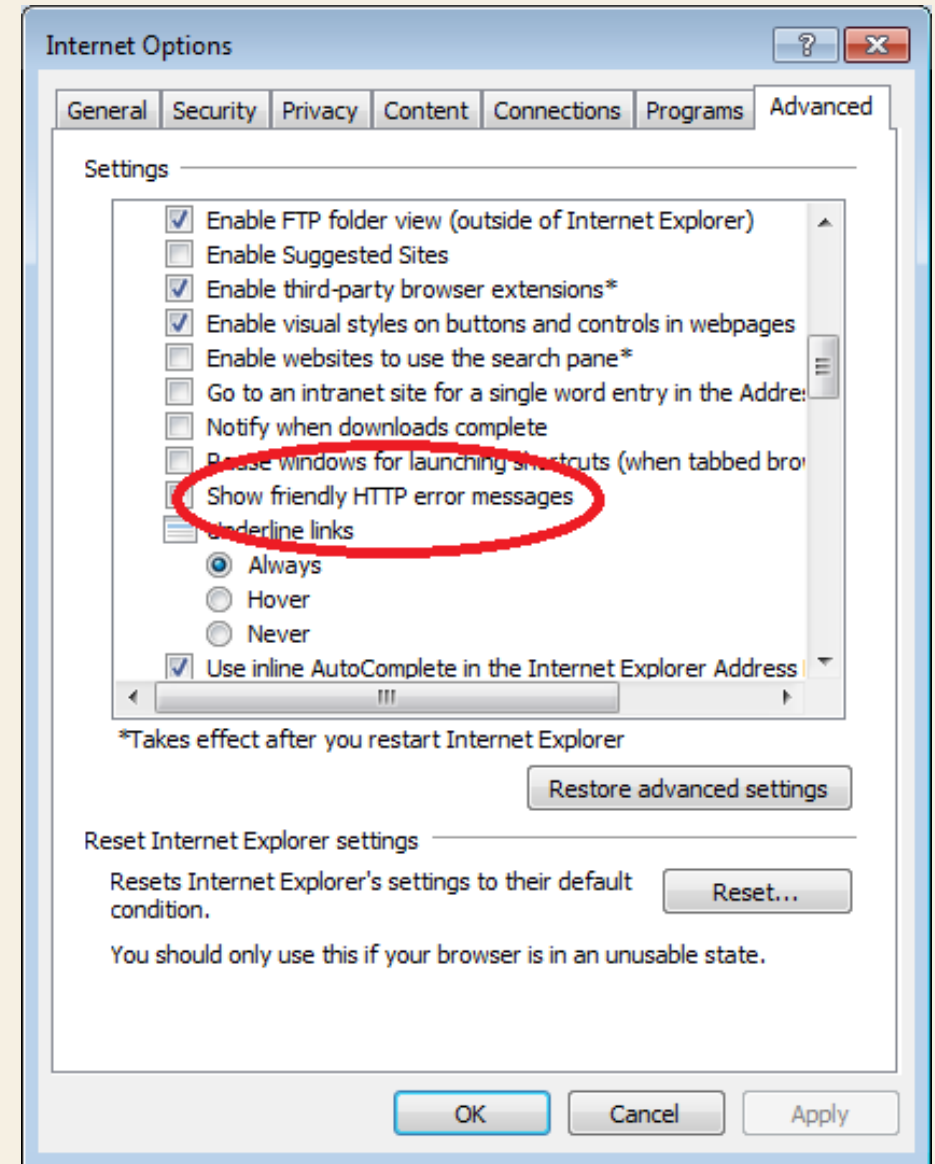
Web Page Issues:

- General Web Page Troubleshooting Tips:
 - Use Multiple Browser types for Testing:
 - Does Internet Explorer behave the same way as Firefox or (insert other favorite browser here)?
 - Also test the pages on the web server itself.
 - Error messages seen with a browser running on the web server itself **MAY** be different (**contain more info**) than browsers running elsewhere.
 - This is done intentionally as an IIS security feature.
 - This is especially useful when you're troubleshooting Web Reports and/or WebCirc.

Web Page Issues:

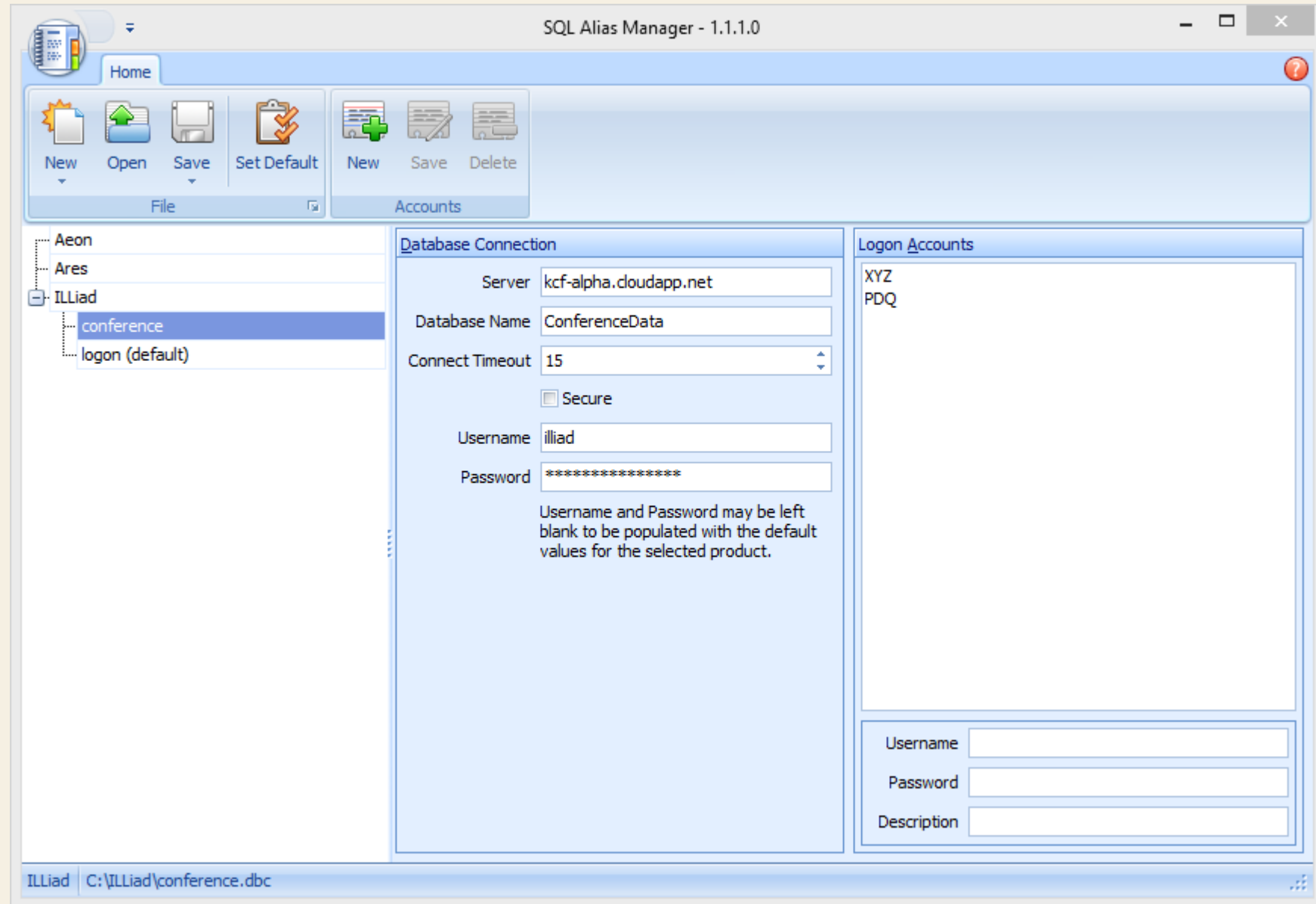
- General Web Page Troubleshooting Tips:

- The so-called “Friendly Error Messages” in IE are **Evil**.
- They tell you nothing useful.
 - Turn them off.
 - **No, really.**
 - **Now!**
 - Unfortunately, this setting is browser-specific, so all you’re really doing here is avoiding shooting yourself in the foot.



Web Page Issues:

- SAM (SQL Alias Manager) Issues:
 - The ILLiad Web DLLs use this thing too.



Web Page Issues:

- SAM (SQL Alias Manager) Issues:
 - Does the ILLiad Client run on the web server?
 - If **Yes**: The SAM is probably set up correctly.
 - If **No**: The SAM may well be the problem.
 - You can also check to see if the ILLiad services or other tools (Customization Manager, etc.) are able to run from the Web Server.
 - All of them use the SAM to connect to the database.

Web Page Issues:

- The WebPath Key
 - Tells the DLL where it should look for pages to deliver.
 - In Multi-site systems, each site has its own WebPath key.

The screenshot displays the ILLiad Customization Manager (atlas) window. The interface includes a top navigation bar with tabs for Home, Z39.50, Notification Templates, and Server Addons. Below this is a toolbar with various icons for actions like New Record, Copy Record, Reset Filter, Save, Delete, Cancel, Show Change History, Favorites, and Setup Wizards. A search bar is also present.

The main content area is divided into two panes. The left pane shows a tree view of system components, with 'WebPath' selected and highlighted in blue. The right pane displays the configuration for the 'WebPath' key. It includes a 'Settings' section with a 'Key Value' field containing 'C:\inetpub\wwwroot\illiad\' and a 'Description' field with the text 'The local path on the web server for the ILLiad web pages and DLL.' Below this is a 'Tracking' section with a table showing changes to the key value.

Value Changed From	Value Changed To	Changed Time	Changed By
--------------------	------------------	--------------	------------

Double-click a tracking row to revert to the previous value.

Web Page Issues:

- WebPath.txt
 - Exists by default in the TestWeb folder.
 - Its purpose is to override the WebPath key and allow the TestWeb DLL to function elsewhere.
- The Problem:
 - Sites edit the ILLiad pages in the TestWeb and then copy everything, including WebPath.txt to the production web location when done.
 - This redirects the DLL back to the TestWeb when triggered, so while you may **THINK** you're using the production pages, **you're actually using the TestWeb pages**.
 - If you move your TestWeb, or migrate to a different server configuration, **your pages break entirely (and no one knows why)**.
- **This is bad. Don't do this.**

Web Page Issues:

- Micro Issues (page/setting specific):
 - CSS Issues
 - Firebug
 - Dreamweaver
 - Bad/Missing Tags
 - SQL Management Studio
 - What Data is coming in and where is it going?
 - Check the DLL log.

Web Page Issues:

- Micro Issues (page/setting specific):
 - Button Text/WebFormValues Table
 - Not much of an issue these days except on the logon pages.
 - Button Text **MUST** match SubmitButtonText
 - SubmitButtonValue **NEVER** changes
 - Field Validation/Regular Expressions
 - <https://prometheus.atlas-sys.com/display/illiad/Changing+Required+Fields>
 - <https://prometheus.atlas-sys.com/display/illiad/Web+Validation+Syntax>
 - <http://www.atlas-sys.com/products/illiad/illiadregex/>
 - Authentication Issues
 - Etc.

Web Page Issues:



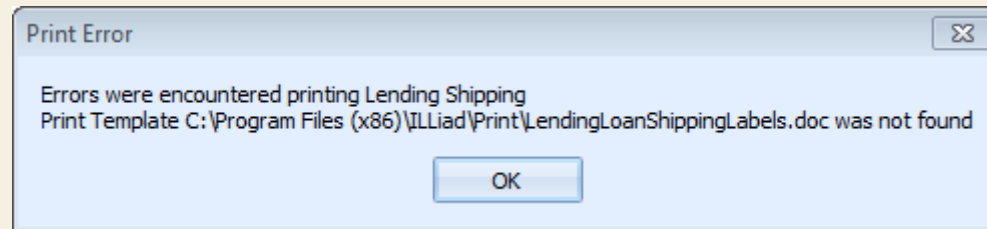
“If you try and take a cat apart to see how it works, the first thing you have on your hands is a nonworking cat.”

- Douglas Adams

FILE ACCESS PROBLEMS

File Access Problems:

- The Usual Suspects:
 - Ports/Network Access/File Sharing
 - Is this thing on?
 - Key Settings
 - Are we pointed to the right place?
 - Permissions
 - Am I allowed to do this?
 - Note: **Check individual file permissions in addition to folders. Are they read only?**



File Access Problems:

- Key Settings
 - PrintDocumentsPath
 - Trailing backslash in the key (important)?
 - Check for Typos.

The screenshot shows the ILLiad Customization Manager (atlas) interface. The window title is "ILLiad Customization Manager (atlas)". The interface includes a navigation pane on the left with a tree view of settings categories. The main area displays the "PrintDocumentsPath" settings for the "ILL" site. The "Key Value" field contains "\\ILLiad\Print\". The "Description" field contains: "Default path for Word documents (for auto-opening). This can be a local path (the same for all workstations) or a UNC path. If blank, ILLiad defaults to using the print folder where the ILLiadClient.exe runs." Below the settings is a "Tracking" section with a table showing changes to the value.

Value Changed From	Value Changed To	Changed Time	Changed By
	\\ILLiad\Print\	3/14/2016 3:37 PM	atlas

Double-click a tracking row to revert to the previous value.

File Access Problems:

- Ports
 - Odyssey: 7968
 - Outbound to the world
 - Inbound from any other server that would send you an Odyssey request as well as any client machine that would send an electronic delivery item to the server.
 - If the client is not allowed through the firewall to the server on 7968, you cannot Deliver articles to the server (posting or sending).

File Access Problems:



“The knack of flying is learning how to throw yourself at the ground and miss.”

- Douglas Adams

EMAIL PROBLEMS

Email Problems:

- The Usual Suspects:
 - Ports/Network Access/Mail Server Permissions
 - Is this thing on?
 - Key Settings
 - Are we pointed to the right place?



- Permissions
 - All allowed to do the
- Note: Check individual

With all of the ILLiad Email templates moved into the database in ILLiad 8.6, Email template file permission issues SHOULD be a thing of the past.

Email Problems:

- Important Key Settings:
 - **E-MailFromAddress**
 - What address is being used to send?
 - **E-MailSMTPPort**
 - What port is being used to connect to the SMTP server for sending? (Usually 25.)
 - **E-MailSMTPServer**
 - What is the Name/IP address of the Mail Server?
 - **SMTPPassword and SMTPUserID**
 - What Username and Password is the system using to send emails?

Email Problems:

- Permissions:
 - Does the machine of origin (the ILLiad Server) have permission to send/relay email (**on the Mail Server**)?
 - Any restrictions?
 - Does the Username/Email Address itself have permission to send/relay email (**on the Mail Server**)?

Email Problems:



“There is no point in using the word 'impossible' to describe something that has clearly happened.”

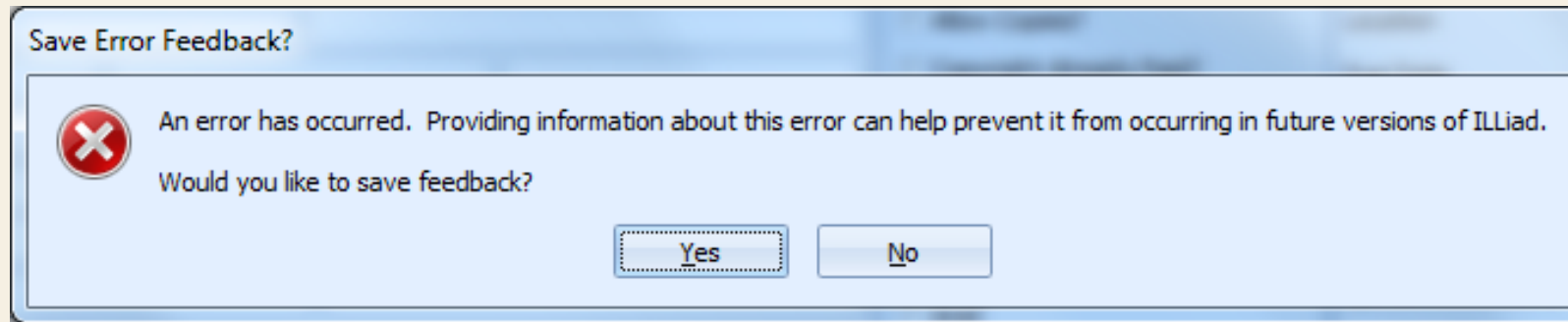
- Douglas Adams

PLAYING DETECTIVE: ROUND 1

Playing Detective: Round 1

Problem: We're having a problem that seems to affect only RAPID transactions.

When you try to open a **RAPID** transaction from the **Awaiting Request Processing** queue, you get this error message:



If you choose **No**, a blank form appears. If you choose **Yes** and examine the Log, it's not clear exactly what the problem is.

See log fragment below, look for transaction **410935**.

I've also ran a SQL Server Profiler trace, but couldn't find anything that seemed out of the ordinary. Below is trace fragment showing the SQL from the only two rows that pertain to a problem transaction number. In this case, the transaction number is **411541**.

Playing Detective: Round 1

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's going on that **SHOULDN'T**?
 - Generic Error Message Pop-up. Little useful information.
 - Error Messages in the log.

Playing Detective: Round 1

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's **NOT** going on that **SHOULD**?
 - Rapid Requests not opening from Awaiting Request Processing

Playing Detective: Round 1

2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- Error Messages.
- Lack of a transaction form opening for processing purposes.
- Log Entries.

Playing Detective: Round 1

2. Evaluate: Can it be repeated?

- The implication of the original message seems to imply it happens for all Rapid Transactions at a status of Awaiting Request Processing.
 - Verify: After checking with the Customer, this was indeed the case.
- If you are not the person originally reporting the problem, can **YOU** duplicate the behavior?
 - **Yes**

Playing Detective: Round 1

3. Investigate:

- Can you identify a direct trigger (**NOT** necessarily a **CAUSE**) for the behavior/misbehavior/failure?
 - Opening a request (via the ILLiad Client) that meets the other criteria.
 - Rapid
 - Awaiting Request Processing

Playing Detective: Round 1

3. Investigate:

- Error Messages:
- What does the error tell you?
 - What system generated it?
 - ILLiad Client/Database
 - Does it indicate anything specific?

Playing Detective: Round 1

Log Snippet:

2013-11-14 09:11:12,068 ERROR AtlasSystems.ILLiad.Client.FormRequestList - Error determining process type

2013-11-14 09:11:12,068 ERROR AtlasSystems.ILLiad.Client.FormRequestList - ProcessTypeConverter cannot convert from System.String.

2013-11-14 09:11:12,406 INFO AtlasSystems.ILLiad.Client.Z3950.FormZ3950Search - Creating Z39.50 Search Form.

2013-11-14 09:11:13,427 INFO AtlasSystems.ILLiad.Client.FormRequest - Loading request data for transaction 410935

2013-11-14 09:11:13,481 ERROR AtlasSystems.ILLiad.RequestData - Unable to load lender address

2013-11-14 09:11:13,481 ERROR AtlasSystems.ILLiad.RequestData - The DataRow provided is invalid due to a missing or invalid LenderString and/or AddressNumber.

2013-11-14 09:11:13,481 INFO AtlasSystems.ILLiad.Client.FormRequest - Request data for transaction 410935 loaded

2013-11-14 09:11:13,482 ERROR AtlasSystems.ILLiad.Client.Program - A thread exception has occurred.

System.NotSupportedException: ProcessTypeConverter cannot convert from System.String.

Playing Detective: Round 1

Log Snippet:

2013-11-14 09:11:12,068 ERROR AtlasSystems.ILLiad.Client.FormRequestList - Error determining process type

2013-11-14 09:11:12,068 ERROR AtlasSystems.ILLiad.Client.FormRequestList - ProcessTypeConverter cannot convert from System.String.

2013-11-14 09:11:12,406 INFO AtlasSystems.ILLiad.Client.Z3950.FormZ3950Search - Creating Z39.50 Search Form.

2013-11-14 09:11:13,427 INFO AtlasSystems.ILLiad.Client.FormRequest - Loading request data for transaction 410935

2013-11-14 09:11:13,481 ERROR AtlasSystems.ILLiad.RequestData - Unable to load lender address

2013-11-14 09:11:13,481 ERROR AtlasSystems.ILLiad.RequestData - The DataRow provided is invalid due to a missing or invalid LenderString and/or AddressNumber.

2013-11-14 09:11:13,481 INFO AtlasSystems.ILLiad.Client.FormRequest - Request data for transaction 410935 loaded

2013-11-14 09:11:13,482 ERROR AtlasSystems.ILLiad.Client.Program - A thread exception has occurred.

System.NotSupportedException: ProcessTypeConverter cannot convert from System.String.

Playing Detective: Round 1

3. Investigate:

- Error Messages:
- What does the error tell you?
 - What system generated it?
 - ILLiad Client/Database
 - Does it indicate anything specific?
 - An issue with Process Type
 - An issue loading the LenderAddress record
 - Thread Exception

Playing Detective: Round 1

4. Analyze:

- What parts of the system are related to this behavior?
 - Can you determine what components are involved in the affected process?
 - **ILLiad Client**
 - **Database:**
 - All usual database tables apply.
- **ProcessType** is likely the key. (It impacts everything else.)
- Look at the impacted Transaction Records. What is the Process Type?
 - **“Borrowing_”** (Note the trailing space.)
- Theory: The Routing Rule moving these transactions is assigning an incorrect NewProcessType value.
 - **Verified by a quick look at the Routing Rule.**

Playing Detective: Round 1

5. Design:

- Given what I know at this stage, how do I fix things?
 1. Fix the Routing Rule first.
 - Assuming no OTHER issues, change the NewProcessType value to remove the trailing space.
 - This will fix things going forward.
 2. Correct the already impacted transaction records via SQL Query.

Update Transactions

Set ProcessType = 'Borrowing'

Where ProcessType like 'Borrowing '

Playing Detective: Round 1

6. Act:

- Once I have a solution in mind, how do I fix things?
 1. Back up the Database
 2. Apply the Routing Rule Change (ProcessType).
 3. Run the Query
 4. **TEST**: Verify that the impacted transactions now open.

“It is a rare mind indeed that can render the hitherto non-existent blindingly obvious. The cry 'I could have thought of that' is a very popular and misleading one, for the fact is that they didn't, and a very significant and revealing fact it is too.”

- Douglas Adams

PLAYING DETECTIVE: ROUND 2

Playing Detective: Round 2

Problem: (New ILLiad System)

I attempted to restart SQL server on the ILLiad server after updating, and it fails to start.

I tried rebooting the SQL Server machine in the hopes that it would autostart, but it doesn't start that way either.

It installed fine initially and has been running fine until the attempted restart.

Playing Detective: Round 2

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's going on that **SHOULDN'T**?
 - Nothing.

Playing Detective: Round 2

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's **NOT** going on that **SHOULD**?
 - SQL Server isn't running and won't start.

Playing Detective: Round 2

2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- The system is down.
- No SQL Logs (SQL isn't running to create them.)

Playing Detective: Round 2

3. Investigate:

- Can you identify a direct trigger (**NOT** necessarily a **CAUSE**) for the behavior/misbehavior/failure?
 - SQL Server Restart
- Is this an ILLiad function?
 - No
- Is it a Windows function?
 - Yes
- Maybe we should have a look at the Windows Eventlog.

Playing Detective: Round 2

Windows EventLog - Security Log Snippet:

An account failed to log on.

Subject:

Security ID: SYSTEM
Account Name: XXXXXXXXXXXXXXXX
Account Domain: University
Logon ID: 0x3E7

Logon Type: 5

Account For Which Logon Failed:

Security ID: NULL SID
Account Name: MSSQLSERVER
Account Domain: NT Service

Failure Information:

Failure Reason: The user has not been granted the requested logon type at this machine.
Status: 0xC000015B
Sub Status: 0x0

Process Information:

Caller Process ID: 0x230
Caller Process Name: C:\Windows\System32\services.exe

Playing Detective: Round 2

3. Investigate:

- Error Messages:
- What does the error tell you?
 - What system generated it?
 - **Windows (Security)**
 - Does it indicate anything specific?
 - **The Windows User in question lacks permission to log on.**

Playing Detective: Round 2

4. Analyze:

- What parts of the system are related to this behavior?
 - Can you determine what components are involved in the affected process?
 - SQL Server
 - Windows (Security)
- **User Logon Type Permission** is likely the key here.
- Theory: They've got the SQL running under a User account rather than a system account.
 - Verified by looking at the SQL Account Setup.

Playing Detective: Round 2

5. Design:

- Given what I know at this stage, how do I fix things?
 1. Have the SQL Administrator change the Windows User account under which SQL Server is running.
 - It needs to be something that doesn't require a manual logon each time it starts, like a Local System Account.

Playing Detective: Round 2

6. Act:

- Once I have a solution in mind, how do I fix things?
 1. In this particular case, there isn't much to do in advance.
 - If you're worried about trashing SQL Server somehow, you could copy the .MDF and .LDF files off the SQL Server to someplace safe before applying the fix.
 - A standard database backup isn't possible unless SQL Server is running.
 2. Make the Windows User Account Change for SQL Server.
 3. **TEST:** Verify that SQL Server can now be started.

“Time is an illusion. Lunchtime doubly so.”

- Douglas Adams

PLAYING DETECTIVE: ROUND 3

Playing Detective: Round 3

- **Problem:** (after recent web page modifications)

We are facing a performance issue. When we restart the ILLiad server everything is working fine at the beginning but when it runs for a period of time, we experience the ILLiad application in very slow performance on retrieving records and also for the Web service.

Many duplicate requests are generated from the Web because users think the system is non-responsive, and they click “submit” repeatedly.

The slowdown also occurs when the system sends emails and when requests are submitted via OpenURL .

Rebooting the server resolves the problem in the short term, but we need to reboot many times a day.

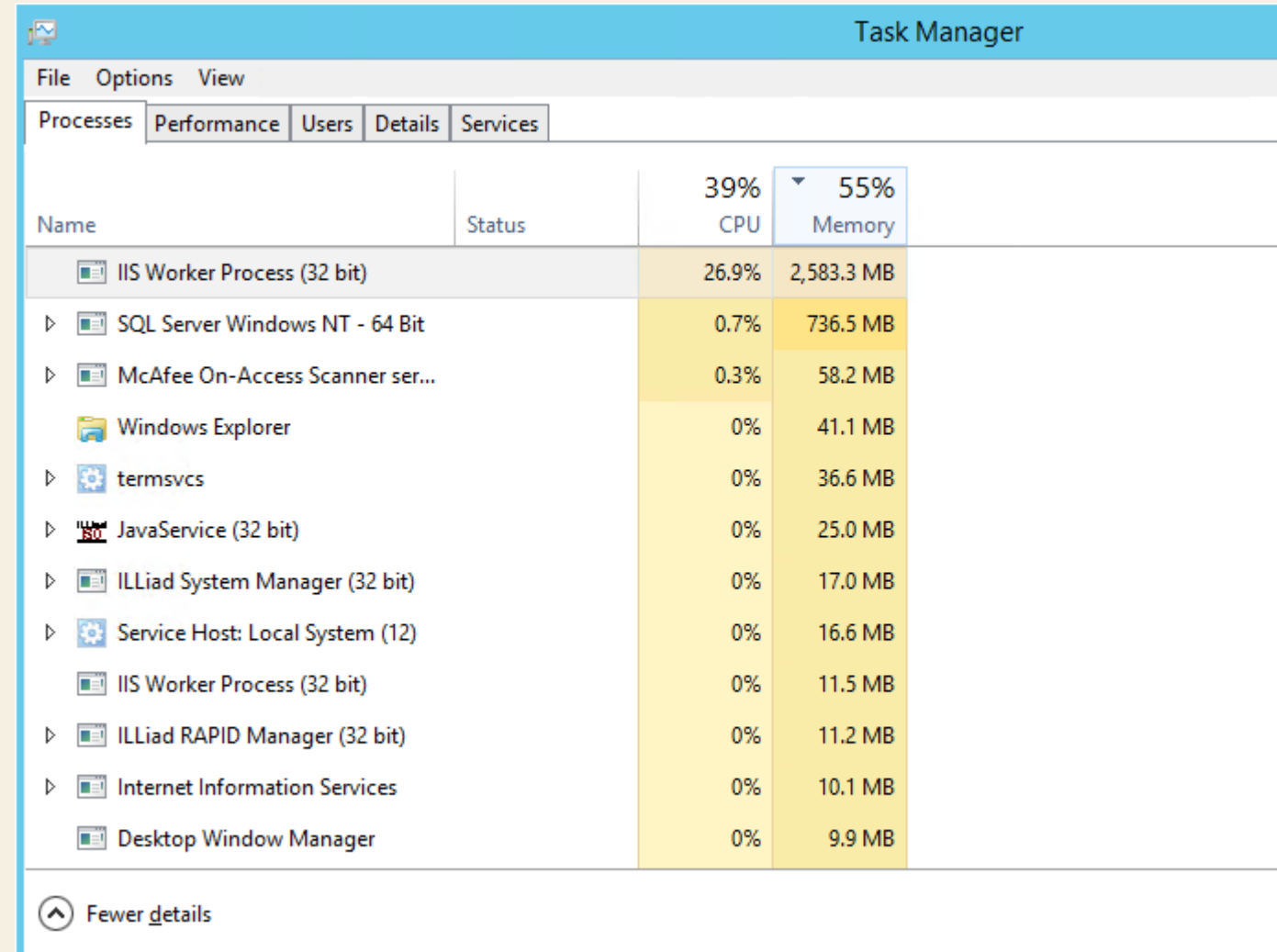
I would like to your help to see what is the cause of this slow response problem. From my experience, when I submit the request via OpenURL link it also will cause the system slow response.

Playing Detective: Round 3

- **Problem: (continued.)**

Task Manager Looks like this:

- IIS Worker Process grows over time.



The screenshot shows the Windows Task Manager Performance tab. The top bar indicates 39% CPU usage and 55% Memory usage. The main table lists various processes with their respective CPU and Memory usage. The IIS Worker Process (32 bit) is highlighted in grey, showing 26.9% CPU and 2,583.3 MB of memory. Other processes include SQL Server Windows NT - 64 Bit, McAfee On-Access Scanner, Windows Explorer, termsvcs, JavaService (32 bit), ILLiad System Manager (32 bit), Service Host: Local System (12), IIS Worker Process (32 bit), ILLiad RAPID Manager (32 bit), Internet Information Services, and Desktop Window Manager.

Name	Status	CPU	Memory
IIS Worker Process (32 bit)		26.9%	2,583.3 MB
SQL Server Windows NT - 64 Bit		0.7%	736.5 MB
McAfee On-Access Scanner ser...		0.3%	58.2 MB
Windows Explorer		0%	41.1 MB
termsvcs		0%	36.6 MB
JavaService (32 bit)		0%	25.0 MB
ILLiad System Manager (32 bit)		0%	17.0 MB
Service Host: Local System (12)		0%	16.6 MB
IIS Worker Process (32 bit)		0%	11.5 MB
ILLiad RAPID Manager (32 bit)		0%	11.2 MB
Internet Information Services		0%	10.1 MB
Desktop Window Manager		0%	9.9 MB

Playing Detective: Round 3

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's going on that **SHOULDN'T**?
 - System slowdowns at various times.
 - IIS Worker Process seems to be growing uncontrollably.

Playing Detective: Round 3

1. **Identify** the behavior/misbehavior/failure that you wish to change.

- What's **NOT** going on that **SHOULD**?
 - Reasonable response times

Playing Detective: Round 3

2. Evaluate: What evidence do you have for this behavior/misbehavior/failure?

- Behavior (System Slowdown)
- Task Manager Resource Information

Playing Detective: Round 3

2. Evaluate: Can it be repeated?

- Yes. Behavior is fairly consistent.

Playing Detective: Round 3

3. Investigate:

- Can you identify a direct trigger (**NOT** necessarily a **CAUSE**) for the behavior/misbehavior/failure?
 - Time

Playing Detective: Round 3

3. Investigate:

- Error Messages:
 - Response Time Errors
- What does the error tell you?
 - What system generated it?
 - SQL Server
 - IIS
 - Windows
 - Systems across the board.
 - Does it indicate anything specific?
 - SOMETHING seems to be slowing the system over time.

Playing Detective: Round 3

4. Analyze:

- What parts of the system are related to this behavior?
 - Can you determine what components are involved in the affected process?
 - Given the systemic nature of the issue, no specific component jumps out.
- Trying an “all-inclusive” troubleshooting method with a focus on anything related to web page functionality (given recent edits).

Playing Detective: Round 3

4. Analyze:

- Checked the Users table required fields:
 - There were a few minor issues there (blank values on just a few User records), but not enough to be the problem.
 - I corrected them anyway, but this was unrelated to the actual problem.
- Verified that no Transaction statuses exist with leading/trailing spaces (which would be caused by bad Routing/EMailRouting rule end statuses).
 - The existence of such bad statuses might confuse some of the automated processes that reference them.
 - There were no bad status values that could be causing problems.
- Checked the Routing table for any logic problems:
 - Nothing jumps out there. Everything looks fairly reasonable.

Playing Detective: Round 3

4. Analyze:

- Checked the DLL Logs:
 - The Errors/Entries that exist look like this:

2016-02-18 00:44:45,182 [DEBUG] Customization 5684 - Key (RoutingOn) found for User NVTGC (ILL)

2016-02-18 00:44:45,189 [DEBUG] ILLiad 5684 - Checking for Routing Rule 1 match on Transaction 206919. Match: convert(datetime, t.notwantedafter, 101) < dateadd(day, 7, getdate())

2016-02-18 00:44:45,233 [DEBUG] ILLiad 5684 - Checking for Routing Rule 31 match on Transaction 206919. Match: (convert(datetime, t.notwantedafter, 101) >= dateadd(day, 7, getdate())) or (t.notwantedafter = "")

2016-02-18 00:44:45,950 [ERROR] ILLiad 4604 - Error processing routing rule 31 for transaction 206918. Object was open

2016-02-18 00:44:45,950 [DEBUG] ILLiad 4604 - Updating form signature for session H230413072H with 220217191110742201431359168182522108722760

Playing Detective: Round 3

4. Analyze:

- Checked the DLL Logs:

- and

2016-02-17 09:41:36,524 [DEBUG] ILLiad 2588 - [End GetILLiadLogonAccount]

2016-02-17 09:41:36,524 [DEBUG] ILLiad 2588 - Opening database connection

2016-02-17 09:41:39,241 [ERROR] ILLiad 2588 - Unable to open connection to database

2016-02-17 09:41:39,241 [ERROR] ILLiad 2588 - Cannot open database "ILLData" requested by the login. The login failed

2016-02-17 09:41:39,241 [ERROR] ILLiad 2596 - Unable to open connection to database

2016-02-17 09:41:39,241 [ERROR] ILLiad 2596 - Cannot open database "ILLData" requested by the login. The login failed

2016-02-17 09:41:39,241 [ERROR] ILLiad 2592 - Unable to open connection to database

2016-02-17 09:41:39,241 [ERROR] ILLiad 2592 - Cannot open database "ILLData" requested by the login. The login failed

2016-02-17 09:41:39,267 [INFO] ILLiad 2596 - [ShowHTML]

2016-02-17 09:41:39,268 [INFO] ILLiad 2592 - [ShowHTML]

2016-02-17 09:41:39,268 [INFO] ILLiad 2592 - Showing File: E:\inetpub\wwwroot\illiad\Error.html

2016-02-17 09:41:39,269 [INFO] ILLiad 2596 - Showing File: E:\inetpub\wwwroot\illiad\Error.html

Playing Detective: Round 3

4. Analyze:

- Checked the DLL Logs:

- and

```
2016-02-16 14:57:05,571 [info] OdysseyUtils (3128) - Moving Odyssey Files to D:\illiad\odyssey
\receive\Received\
2016-02-16 14:57:05,707 [info] TOdysseyDataModule (3128) - Adding ISO update to ESPUpdate.
2016-02-16 14:57:06,109 [error] TOdysseyDataModule (3128) - [] Exception during UpdateOCLC
2016-02-16 14:57:06,112 [error] TOdysseyDataModule (3128) - [] Violation of PRIMARY KEY
constraint 'PK_ESPUpdateTN2'. Cannot insert duplicate key in object 'dbo.ESPUpdate'. The
duplicate key value is (206817, ISOHOLD, , Received, Borrowing)
2016-02-16 14:57:06,115 [error] TServerProcessingThread (3128) -
[1D60459038E145B7A056E6DB0A355EF3] Unhandled exception in server processing thread
2016-02-16 14:57:06,115 [error] TServerProcessingThread (3128) -
[1D60459038E145B7A056E6DB0A355EF3] Operation aborted
2016-02-16 14:57:10,816 [info] TOdysseyDataModule (3844) - Initializing Data Module
```

Playing Detective: Round 3

4. Analyze:

- Checked the DLL Logs:
 - All seems consistent with system speed/response issues as a **SYMPTOM**, but none of it could really be causing it.
- Verified that SQL Server is set to allow the maximum number of connections, so that's not slowing anything down.
- Checked the Connection Manager Service Logs:
 - There is very little activity here (as the site doesn't really use OCLC) and no errors.

Playing Detective: Round 3

4. Analyze:

- Checked the Odyssey Manager Service Logs:

- There's only one real error there:

2016-02-18 00:40:15,828 [info] TOdysseyDataModule (2576) - Updating System Information. Type: Next Run Info:20160218 00:41:15

2016-02-18 00:40:16,137 [error] TServerProcessingThread (6740) - [4246BE3B7EAE4F609329E99561A3D3AB] Unhandled exception in server processing thread

2016-02-18 00:40:16,137 [error] TServerProcessingThread (6740) - [4246BE3B7EAE4F609329E99561A3D3AB] Query timeout expired

2016-02-18 00:41:15,832 [info] TOdysseyDataModule (2576) - Initializing Data Module

2016-02-18 00:41:15,846 [info] TOdysseyDataModule (2576) - [] Configured for Single Server Support

- This ALSO seems consistent with speed/response issues as a **SYMPTOM**, but it's not causing it.

Playing Detective: Round 3

4. Analyze:

- Checked Rapid Manager Service Logs:
 - There are a number of timeout issues resolving rapid2.library.colostate.edu, but nothing that seems to be impacting web page function/server speed.
 - Again, this seems consistent with speed/response issues as a **SYMPTOM**, but it's not causing it.
- Checked the System Manager Service Logs:
 - The only errors there seem to be related to the OCLC connection, which was expected, given that OCLC is not used here) and not relevant to the problem.

Playing Detective: Round 3

4. Analyze:

- Checked the ISO logs:

```
2016-02-12 10:43:12,013 [INFO] [ISOSenderThread] (Timer-0)- Created new ISOSenderThread. TN: 206813 ISO: 328089
2016-02-12 10:43:12,014 [INFO] [ISOSenderThread] (Thread-148)- Send using protocol: tcp
2016-02-12 10:43:12,015 [INFO] [ISOSenderThread] (Thread-148)- Sending APDU using TCP (Direct Connect)
2016-02-12 10:43:33,025 [WARN] [ISOSenderThread] (Thread-148)- Connection failed - host may be down. Will try again later.
2016-02-12 10:43:33,026 [WARN] [ISOSenderThread] (Thread-148)- java.net.ConnectException: Connection timed out: connect
2016-02-12 10:43:33,027 [WARN] [ISOSenderThread] (Thread-148)- Send failed (TCP) try 1. Waiting for 30s. TN: 206813 ISO: 328089
2016-02-12 10:44:03,028 [WARN] [ISOSenderThread] (Thread-148)- Trying to send again (TCP) TN: 206813 ISO: 328089
2016-02-12 10:44:03,029 [INFO] [ISOSenderThread] (Thread-148)- Sending APDU using TCP (Direct Connect)
2016-02-12 10:44:24,036 [WARN] [ISOSenderThread] (Thread-148)- Connection failed - host may be down. Will try again later.
2016-02-12 10:44:24,037 [WARN] [ISOSenderThread] (Thread-148)- java.net.ConnectException: Connection timed out: connect
2016-02-12 10:44:24,038 [WARN] [ISOSenderThread] (Thread-148)- Send failed (TCP) try 2. Waiting for 300s. TN: 206813 ISO: 328089
2016-02-12 10:49:24,043 [WARN] [ISOSenderThread] (Thread-148)- Trying to send again (TCP) TN: 206813 ISO: 328089
2016-02-12 10:49:24,043 [INFO] [ISOSenderThread] (Thread-148)- Sending APDU using TCP (Direct Connect)
2016-02-12 10:49:45,047 [WARN] [ISOSenderThread] (Thread-148)- Connection failed - host may be down. Will try again later.
2016-02-12 10:49:45,048 [WARN] [ISOSenderThread] (Thread-148)- java.net.ConnectException: Connection timed out: connect
2016-02-12 10:49:45,049 [WARN] [ISOSenderThread] (Thread-148)- Send failed (TCP) try 3. Waiting for 3000s. TN: 206813 ISO: 328089
```

- Again, the errors I see there are consistent with speed/response issues as a **SYMPTOM**, but it's not causing it.

Playing Detective: Round 3

4. Analyze:

- Given that nothing on the ILLiad side of things seemed to be causing the problem, we looked at some other non-standard possibilities.
 - The only truly non-standard addition to this system was the .ASP-based logon that was added to the web pages to communicate with an LDAP server.
 - Did some Google-searching and found the following:
 - <http://stackoverflow.com/questions/245727/iis-worker-process-using-a-lot-of-memory>
 - <http://stackoverflow.com/questions/4790684/application-pool-memory-usage-monitor>
- Theory: Something in those .ASP pages is leaking memory, which over time accumulates and eventually takes over the system.
 - Apparently this is a common issue with .ASP pages and application pools in the later versions of IIS.

Playing Detective: Round 3

5. Design:

- Given what I know at this stage, how do I fix things?
 - Suggest taking a look at what is actually being done by those .ASP pages, and any related processes, to see if something there can be refined to be less of a memory leak.

Playing Detective: Round 3

6. Act:

- Once I have a solution in mind, how do I fix things?
 1. Research ASP Memory leaks to change the existing .ASP code to something more suitable to ILLiad.
 2. Back up existing pages before editing.

“I seldom end up where I wanted to go, but almost always end up where I need to be.”

- Douglas Adams

Questions
& Answers

