

Slide 2



Slide 3





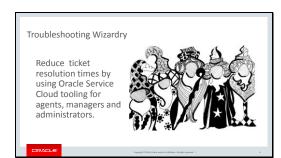
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Good Morning Everyone,

Are you set to have a special session today?

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My intended results from this session will be for you to reduce ticket resolution times and to increase your comfort level in troubleshooting Oracle Service Cloud with the use of tools.

Today's session will be a high level introduction to these tools, but while I am introducing them to you, you might want to write down which ones you would like me to go more in depth on.

There will be time at the end of the webinar to support your preferences and we will build another session focusing on those particular tools

This webinar is intended to be an interactive webinar, so you can respond to my questions by Press #6 to unmute.

Ready to see how tooling for troubleshooting will make your job easier?

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mail.

When trying to send a response to an incident, the screen greys out and after several minutes a dialog box is displayed with the message "Unable to Communicate with Server". She can send responses to other incidents with no issues.



What do you know about the situation?

ORACLE

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Let me jump right into a typical situation for an Oracle Service Cloud administrator

You enter the office on Monday morning and open your email to see the following message from one of your agents

When trying to send a response to an incident, the screen greys out and after several minutes a dialog box is displayed with the message "Unable to Communicate with Server".

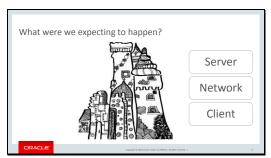
She can send responses to other incidents with no issues.

What do you know about the situation?

There is a message on the screen -Unable to Communicate with Server It is happening on an incident workspace It appears that a single incident is a problem

The issue slows down the agent because it takes several minutes to complete

How significant is this issue?



Lets take a minute to examine what we think is going to happen during this situation.

What is happening on the server?
On the client?
In the network?

The client machine would be sending a communication to the server to save an incident into the database.

The transaction generated an error on the client.

If the issue took several minutes – likely it is a timing issue

Do you think this could be a result of the client expecting data from the server?

Simplified Oracle Service Cloud Architecture

Server - where site data is stored, mail is sent, web pages are delivered, utilities processing occurs, cron and scheduled jobs are run, scripts are processed, API requests are handled, and custom object

event handlers are run. Oracle's equipment.

Network - The communications path between the client and the Server. May include equipment that might not belong to either the customer or Oracle.

Client - How the application is presented to the user. Oracle has several client options, the console a windows desktop, a web browser, Brower user Interface, and Web Pages via the customer portal. Customer's equipment

The client machine would be sending a communication to the server to save an incident into the database. The transaction generated an error on the client.

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What information is missing?

- What interface she is working in?
- Who is she?
- When did the problem start?
- Where is the Message? What actions occur before this behavior? How often is it occurring?



How long will it take you to get this information?

How many people will you need to talk to?

Is this type of activity something that takes up a good portion of your day? Especially on a Monday?



What if I told you about a tool that can answer 4 of these questions – which four you think it would be?

The use of one tool can answer 4 questions

What interface she is working in?
Who is she?
Where is the Message?
What actions occur before this behavior?

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Easy to use – all windows machines have it on board.

Easy to access — Press System, type psr in search box Select the psr.exe program.

Set up your screen, Click record and do the actions that will make the behavior occur.



This tool gives full screen shots for up to 25 steps without needing adjustment.

Lets review missing data questions: What can we answer now with the data we captured?

What interface she is working in?
Who is she?
Where is the Message?
What actions occur before this behavior?

We are 66% percent done gathering our data for the issue.

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When did the problem start? How often is it occurring?

When the problem started is a bit more of a difficult question to a customer to answer often you can conjecture that the problem started shortly before it was first reported.

So lets look into how often it is occurring?



I have broken the product up in to 6 sections for this conversation – let's review the kinds of errors presented in each section while you decide in which area of the product our error belongs.

To answer our question: Yes, in Communications – the last box on the right.

Your clue was the words unable to "communicate with server" – matching that to Server Error

The problem has to occur after the data is entered into the client

We need to look and see if the problem is before the data makes it to server or on the return trip to the client.

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Looking at the tools for the tools box – all of the items in bold can be accessed by the customer with sufficient privileges. The items in regular type face are able to be accessed by technical support. You as a user can request these to be run if you have a test scenario to work through.

The top of the tool box is the Test Site – often it is thought of for development purposes but it is also a handy tool for testing and troubleshooting.

What I would ask you to consider today is if there is a benefit to tooling your test site specifically for some troubleshooting tasks.

The best looking tool is the Communications Log viewer as it will contain both the SOAP envelope being sent to the server and the response that was received.

Console debugging logs can only be made visible via the setting of a configuration verb by Technical Support

What can be found there are – workspace rule execution
Soap requests and responses for communication to the server Information about workflows and workspace execution
Painting of the screen, menu drop downs
Optl_list downloads and refreshes
Calls to Add-ins for execution
Ability to turn on php tracing

Are not to be left running all the time as they can cause performance issues.

While we have already captured the steps to reproduce, and we have a tool to capture the SOAP envelope.

We are looking for how often this is happening at this point.

Because the communication is occurring between the client/Console and the Server you have another tool you can use – the Error Logs themselves. All severe errors are logged in the error log.

(move to error log)

Submitting a message to exception help

-

This will generate a stack trace of the error in context. The generated log files with contain information about the actions a user was taking prior to the error occurring. This information helps us to understand what action generated the issue, whether the data was input incorrectly, or a system error occurred.

PHP tracing, some trace files can be generated and left on the server for the technical support engineer to find.

Typically you would have had a request from an engineer to create these files.

The data inside these files is confidential and will remain on Oracle servers.

Our trace files help us to see how the XML input data is parsed, acted on and XML response data is output to the client.

When should you submit an exception message to Oracle? If the issue is a troubling one, reoccurring often, we suggest that you press the submit. This will allow Oracle to know how frequent the issue is and which agents are seeing the behavior.

Error logs – (we should be trying to eliminate as many of these entries as possible)

Error log entries are the more serious of the two types of logs cited here. An Error log entry usually contains a message and a partial stack trace. There are clues in the message that will help to indicate where is it coming from. What becomes important here is to capture the entire message in context –

Info logs – are similar to error logs except these messages do not imply that something is critically wrong at the system level. The greatest number of messages are around reporting.

Audit Logs, help to document when a change in the database has occurred.

Reports – making use of the Reports Explorer to create simple reports on a table basis can be a very effective tool for troubleshooting.

Utility Portal Logs – some users have access to these logs through MySite tools. In these logs you can see if a utility run has occurred and if any errors are reported.

Web Developer Tools – all browsers are equipped with this toolset. It is helpful to know when and how to use it.

Rule Logs – Audit log of actions taken by the rules engine, typically records only rules that where hit and action was taken.

Fiddler – External tool that is used to follow the call going out from the client to the server and back to see if there are network errors along the way. We most often are looking for the https error codes and the sequence of events that occur.

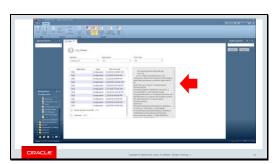
Oscinfo.bat Utility - Answer ID 2412

The Workstation and Network Data
Collector is a .bat utility that can be run
on a workstation to collect pertinent
system and performance information.
This information is written to a text file so
that our technical support agents can
review and evaluate the following:
Workstation information -- including
memory and disk space
Network connectivity -- traceroute
information with loaded packets
Component Manager Log file -- list
of Service Cloud application components
that have been downloaded to the
machine

Snipping Tool and Video Capture - We have been using Jing and the Windows

Snipping Tool. For Video Capture we can use Jing and Flashback Pro

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Error logs and info logs look similar

The application that throws the error is listed, and the type of error is listed along with the actual error message

As your logs generally only cover the last 24 hours unless something dramatic is happening, It is a good idea to locate the error and do a quick count of how many times it has occurred today.

Capturing a copy of error from this screen also excellent.

That was a great introduction in to the tools in the toolbox - how many of these tools are accessible to your site managers?

If an agent or manager were able to see the error logs and be able to include this data in the report being sent to you would it make your job easier?



Now lets turn to the wizard's tooling library for a moment. – A reminder, I will be going over these tools on a high level today, if you want more details please write that tool down and we can discuss it more in depth in another session.

Can anyone name their best test for connectivity? What tool do you use? Fiddler, Web developer Tools and a login. Do you have an account set up on each site that allows you to pick and interface, and login using standard workspaces? Do your managers know how to access that log in for testing?

Attempt to login as a customer and a end user. An administrator can also use VCIO for notifications, can your site manager see the VCIO notifications?
Check error logs for communication errors and max connections. Ensure agents/managers know how to collect these and report them in you organization

What about using a short interval transaction report? Being able to look in the last 15 minutes or less interval is a quick way to see if you are up and running and accepting transactions.

Identifying Source of Changes? Have a plan and checklist at hand to help you and your site managers monitor changes in:

Version, Custom Fields, Custom Object, Portal Page, Rules, Reports, Integrations, Add-Ins, CPM, Custom Scripts, Deleted Records

Are these reports in a special folder for easy access?

Are there instructions on where to look in the console or on the ask page for information?

Tests for external systems
Ensure that remote offices have a way to sign into to VCIO to see utility logs. Train them to look for the error codes for the utilities that affect their functionality in the logs and report them to you.
For example, someone who processes incidents filed by email may be trained to monitor the techmail utility.

Review Utility Portal Logs. Train agents to Include the Error codes in Service Requests. They can include a screenshot of log showing how often the error is occurring.

Remember that sample log-in for testing, if you suspect mail is not working you can use this account to create an incident and respond to it. Same is true for chatting, you can even have a queue dedicated to testing.

Data Snapshot tooling - likely this is a tool you may not give to an agent, but you might consider giving it to a site manager as a first steps troubleshooting My favorites are a series of last 100 reports or queries All top objects are handy tools to have -Incidents, contacts, organizations, sessions, chats, etc. I also have a last hour/minute transactions report - I have mine sorted by API and source level so that I can quickly see what the product is doing. This tool could be shaped by visibility but it still will be useful to see if an area of product is up and running.

I have found these reports helpful especially after an outage of some sort to

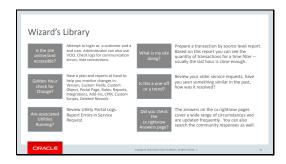
reassure myself that the train is back on the track and moving in the right direction.

Tooling for Severity and Frequency of issues --

If your managers are on the contact list and can file service requests train them in how to review their service requests. I also build a local toolbox of information I can use help others quickly. For example in my case, I make use of a OneNote Notebook to help me track any unusual or new queries or steps I used to solve an issue and keep a set of links to articles/answers I used as reference to solve my problem. When someone comes to me and asks me how to do something. I will look in my magic spell book, and give them the page as reference. Having that handy reference system saves me hours every week. The best part, I no longer have to handle those tickets personally to know they have been solved out correctly.

You can train your agents to become self educating using the Oracle's and your own knowledge base, teaching them basic searching techniques like keywords, and phrases.

The answers on the cx.rightnow pages cover a wide range of circumstances and are updated frequently. You can also search the community responses as well.



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I bet that was a fast trip for you, take a minute to write down the tools that interest you most.

Now that we have discussed the tools Lets go back to our original scenario, let me remind you about it

When trying to send a response to an incident, the screen greys out and after several minutes a dialog box is displayed with the message "Unable to Communicate with Server". She can send responses to other incidents with no issues.

We have the error message now, the profile and the workspace identified, and we have a set of steps and we know something about the frequency in the last 24 hours.

Now its your turn, our next step should be?

Testing the actual workspace – where?



Run the tests in two environments, the test environment you have set up with the custom workspace, run them again with the standard workspace that you have already tooled the test database with

If the same behavior exists on a standard workspace – likely you have a potential product defect. Teaching your agent or site manager to run the test in the standard environment you set up for them now gets you the following in that Monday morning e-mail:

An incident with full documentation, proven steps to reproduce, a front line seat for the defect remediation express and you have finished your first cup of coffee. We agree not a bad way to start your week.



When should you consider a test site refresh?

When is it faster to use Export/Import?

What items do we need for this

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I know that we are all looking for ways to make the process simpler and faster, one of these is to have a clear idea when you need a clean test site and when you can import things you need into an existing one.

I would recommend consider a test site refresh if:

Site versions are different by major versions

Your issue's behavior is dependent on Business Rules, Products, Categories, Custom Fields, or message templates and there is a big difference between the last test site refresh and your production site.

You can leverage Export/Import for (everything else_ Reports, Workflows, Workspaces, Custom objects, Process Models, Configuration Settings Metadata, message Base Metadata, Guided Assistance, Segments, Agent Scripting, Profiles, Contacts, Accounts, Incidents, Organizations

You can show your agents how to export data to assist you in the troubleshooting process.

What items do we need for this test?

Profile, custom workspace, a sample incident thread



In case you were not lucky enough for the standard workspace to show the same behavior as the custom one our next step is deconstruction

Typically as we peel the layers apart, we start with a copy of the custom workspace or workflow (we try never to tear down an original)

You can disable the Add-ins by opening a console session, and quit it with the task manager and answer the Question – The application did not exit properly the last time it was started. Would you like to temporarily disable extensions that may have caused the application to behave improperly? "Yes"

A thought about disabling rules. If you tooled the test site to have a testing state near the top of the rules it would be possible to capture the fact you are in the test state and be able to route rule execution around existing rules to exclude specific rules - this will help you get to the hello world example faster.

Workspace rules, are disabled in the workspace editor by unchecking them and saving your copied workspace.

Tabs and Fields are a matter of elimination, be sure to remove them one at a time. Once you find that the error stops, back up one step and test again. Use the Program Steps recorder to record your findings. Remember where to find it? In the Start Menu window, search for PSR and select psr.exe

Let's look at other situation and see if we can use our tools to help reason through it together.

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You have an agent that has reported seeing message like this in the console.

The source message is from the php code responsible for parsing the XML output file and displaying it on the screen.

Remember the Server Network Client example.

Oracle Service Cloud server works on an XML Input file from the client, The server processes the request and the server generates an XML output file to be sent to the Client

At what point is it likely that this situation occurred? To refresh our mind I will show the chart again



Typically it is the result of the XML output file not being formatted correctly or being missing altogether

What do we want to capture?

And how do we go about it?

(Next slide....)

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Likely the issue will be found in the error log file,

We are looking for a partial XML output file

I would be making use of the console debugging logs because this type of error can happen in the console on either the foreground or the background threads.

If I did not have debugging logs, I could ask the agent to press the submit button then next time the error appears.

What I want to see is what was the console attempting to do -- load a screen, gather data for a drop down box, run a report?

I have a handy tool that lets me get a grip on this type of data.

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When debugging is turned on, it is possible to "capture" or save logs to a text file you can attach to a service request.

You don't want to leave debugging on all the time, only when you need to collect some specific information.

We find this type of debugging really handy for workspace rule execution — we can see that a rule conditions were met and what was executed as a result. (zoom in on arrow)

When I troubleshoot, I turn this on, do my preliminary steps to set up the test, and just before I take the action I want to review, I hit the clear messages button.

I then do my action, and review the last messages, if I have found something that explains the behavior I have seen, I will hit the Save Messages button to export the information on this screen for use later.



Because the log message viewer file can become long, and difficult to read

I have used conditional formatting in an excel spreadsheet to help me spot parts of the log that are of interest to me. This is a glimpse of how I leverage Excel in my troubleshooting routine.

How I prepare my file for review is to open the text file in notepad ++ ensure that XML statements are all parsed on single lines and Paste into my spreadsheet.

One additional feature is that I have inserted a thread column on the left. I copy that formula to match the length of the file and set a filter on the top row. By using the filter I can see each thread individually.

I have use a BOLD black highlight to indicate commands or keys pressed, and a Red highlight to make Errors visible. (go to demo and look at second column)

In this spreadsheet I have set up three columns so that I could compare three different runs at the same time.

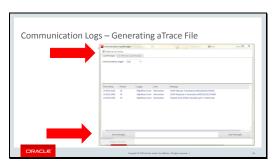
Here I am jumping down to the error thread and working my way back up in

the file. I am looking for the code that called for XML file to be created – specifically to get the SOAP envelope so that I can test that.

SOAP calls are found in the Communications Log

It will likely return with the same error being reported to the agent on the screen.

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It is also possible to obtain communication logs – a log of the calls.

If you are partner/developer, you might get some benefit from the trace file. This is the same file I use to trace things down. We don't have time today for an in depth explanation of the file. If you have been set up for this privilege you can learn more about how these files are organized before you create them.

My biggest caution we only trace for very short periods of time. Usually seconds, not minutes.



Today I have taken you on a whirlwind course through tooling for faster troubleshooting and issue resolution – I am sure there are questions out there. Now its your turn again...

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