

Re: ADAM – The Server is not operational (Joe Kaplan, question for you)

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Source:

http://www.tech-archive.net/Archive/Windows/microsoft.public.windows.server.active_directory/2006-02/msg00666

- *From:* "sl" <connect@xxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 7 Feb 2006 20:28:56 -0000
-

Thanks Eric and Joe – I had read up on quite a bit of ephemeral ports and TIME_WAIT.

Found a good blog here

<http://www.port80software.com/200ok/archive/2004/12/07/205.aspx>

Unfortunately i won't find out the exact circumstances until Friday when i go on site (i just have some code snippets and some issues).

My suspicion is that they don't use connection caching and they also use RefreshCache() rather than specifying the attributes to refresh which must be a hit!

There will be one ldap connection for some ops. However, each user (created as a new user in ADAM) will have to then be able to log on as themselves and set their user properties.

This will likely use SimpleBind and the upn and pwd that was previously set. This i guess runs as a new connection.

I'd have to think about why they don't use NLB rather than a single server with an increased number of ephemeral ports or minimising tcp time wait.

steven :: <http://stevenR2.com>

"Eric Fleischman [MSFT]" <efleis@xxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:OmwIgwALGHA.1536@xxxxxxxxxxxxxxxxxxxxxxx

You can also increase the # of ephemeral ports. If memory serves me correctly, we only use up to port 5000 by default, however the spec allows for 16 bit port numbers. So you could crank it up to say 40000 or something, assuming your server can scale to this.

Further, if needed, you can turn down the amt of time that ports sit in time_wait. HOWEVER, in so doing you risk packets still in flight hitting the port after it has been recycled. So, you'd want to carefully understand your network and the LDAP clients that will be hitting ADAM before you travel down this road. Hopefully, increasing the # of ports available is enough for you.

~Eric

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—

Eric Fleischman [MSFT]
Microsoft Windows Server Division
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"Joe Kaplan (MVP – ADSI)" <joseph.e.kaplan@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:uSOJ%23TOKGHA.2416@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

We have a parallel thread going on the group where we are discussing this very thing. :)

If different credentials are used under high load with ADSI, it just won't scale, as the model uses a different LDAP connection for each set of credentials and we'll eventually run out of wildcard ports.

However, if we use one set of credentials (a service account, for example), then ADSI should scale. The trick here is to keep one object that has opened an LDAP connection alive for the duration of the app. There are a ton of different ways to do this in an ASP.NET app (static variables, ASP.NET cache, custom cache, etc.).

Joe K.

"Dmitri Gavrilov [MSFT]" <dmitrig@xxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:ujlk59zKGHA.1508@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

You should chat with Joe Kaplan on ADSI newsgroup (though he is here too). ADSI does do connection pooling for you, and S.DS does use ADSI. However, ADSI only holds the pool as long as you have outstanding COM references to its objects. Which means, if you call dispose, you lose it.

Now, there's another complication. AFAIK, ADSI pools connections based on credentials. So, if you are binding using different creds, then you are not making use of the pooling. Joe can probably provide you with more info and workarounds.

—

Dmitri Gavrilov
SDE, DS Admin eXperience

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"sl" <connect@xxxxxxxxxxxxxxxxxxxxxx> wrote in message news:O4rDInwKGHA.216@xxxxxxxxxxxxxxxxxxxxxxxxxx

Also, i had a look at what reflector gives me for the dispose method of the DirectoryEntry. The close() calls unbind().

Unless there is some magic happening whereby connections are reused under the covers, then i'd suspect that each timem you call dispose you have to do a full rebind for each and every client. Would it be safe to not close or dispose these objects in this way (either in "using" or by calling dispose) and keep them open and reuse the connection.

The idea is that some connection factory could manage this for me, but i know in the world of ADO connections this is not a good thing to do as it's all managed and optimized for you. I wonder whether it is the same for adam.

Regards,
steven :: <http://stevenR2.com>

"Dmitri Gavrilov [MSFT]"
<dmitrig@xxxxxxxxxxxxxxxxxxxxxx> wrote in message news:eoxcTIwKGHA.344@xxxxxxxxxxxxxxxxxxxxxxxxxx

Looks like you are running out of ephemeral ports on the client. Look at this KB that describes a similar problem (sorry, could not find anything better than that):

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<http://support.microsoft.com/?id=836429>

The resolution is to reuse
ldap connections.

--

Dmitri Gavrilov
SDE, DS Admin eXperience

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"s1"

<connect@xxxxxxxxxxxxxxxxxxxx>

wrote in message

<news:%23zyfcOpKGHA.1192@xxxxxxxxxxxxxxxxxxxxxxxx>

Interested in
some
questions
around the
limits or
ADAM.

I have
created a
simple test
console app
that fires off
multiple
threads.
With each
thread a
single user
is created
and added
to the
readers
group. The
thread then
terminates.
This is
much like a
typical
registration

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on a web
page. I have
noticed that
on two of
my
machines
(completely
different
specs), the
limit is
around 300
concurrent
connections
to the
ADAM
server
before i get
"The server
is
not
operational"
on a bind to
the
directory
store.

Is this
conincidence
or is there
something
around the
300 mark i
should be
aware of?
300 is not a
bad number
– especially
on two
machines
that aren't
server
machines,
but it is how
close they
are to
300 (and
again one is
twice as fast
as the other
and double
the

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memory)
that makes
me think.

It is
interesting
to me that
this
limitation is
on the bind
and not
on saving
data and so
on – does
anyone
know what
causes the
limiting
factors on
ADAM
connections
are? In
other words,
what causes
the
"Server is
not
operational"
error to
happen,
even though
it does
actually
work for
those that
made a
successful
bind? My
memory
seems
ok, my cpu
isn't hit too
hard.

I'd love to
get into the
details of
this (even if
it brings up
adsi
and so on).

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It may be
useful for
me this
week!

Regards,
steven ::
<http://stevenR2.com>