Perl Net::SNMP Error: Time synchronization failed during discovery

- While working with SNMPv3 with a specific SNMP agent, we encountered problems with SNMPv3 "Time synchronization", some research determined that this error could be ignored, so modifying the Net::SNMP Perl library could workaround this problem.
- If you encounter the 'Time synchronization failed during discovery' error using the perl Net::SNMP library there may be a fairly easy work around. It may be as easy as editing the Net::SNMP module to not invoke this error. The following advice should be executed as root.
- The following was done with the Net::SNMP Version 6.0.1 package. If this library is upgraded, this patch may need to be reapplied.

Find Net::SNMP

In order to find where Net::SNMP is on the subject system issue the following command.

```
# find /usr/ -type f -path "*/Net/SNMP.pm"
/usr/local/share/perl5/Net/SNMP.pm
/usr/share/perl5/Net/SNMP.pm
```

If you are unfortunate as in the above example, two SNMP.pm files may be returned. In order to determine which one perl is invoking use the perl -V command.

```
# perl -V | grep -A 30 @INC
  @INC:
    /usr/local/lib64/perl5
    /usr/local/share/perl5
    /usr/lib64/perl5/vendor_perl
    /usr/share/perl5/vendor_perl
    /usr/lib64/perl5
    /usr/share/perl5
    .
#
```

The @INC array is a list of directories that perl looks in to find modules. This is a top down, first match find operation. Based on this the version in /usr/local/share/perl5/Net will be utilized because it will be found first.

Edit Net::SNMP

We were able to get the agent to work by doing the following:

- Commenting out part of the if statement on line 2545. (The if statement will need to be re-written)
- Commenting out lines 2562 through 2565.

```
2544    if (($this->{_security}->discovered) &&
2545        ($this->{_error} =~ /usmStatsNotInTimeWindows/))
2546    {
2547        $this->_error_clear;
2548
2549        DEBUG_INFO('discovery and synchronization complete');
2550
2551        # Discovery is complete, send any pending messages
2552        while (my $q = shift(@{$this->{_discovery_queue}})) {
2553            $DISPATCHER->send_pdu(@{$q});
2554        }
2555
2556        return TRUE;
2557    }
2558
2559    # If we received the usmStatsNotInTimeWindows report or no error, but
2560    # we are still not synchronized, provide a generic error message.
2561
2562    if ((!$this->{_error}) || ($this->{_error} =~ /usmStatsNotInTimeWindows/)) {
2563        $this->_error_clear;
2564        $this->_error('Time synchronization failed during discovery');
2565    }
```