



Using AI to Write Better Bug Reports

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The Problem with Bug Reports

- Sometimes we can't replicate the bug
- It's unclear if the issue is in core vs add-on
- Reports can be missing technical details
- A lot of time is wasted just figuring out what the issue actually is

How AI Helps?

- Explains the issue clearly
- Identifies affected code, functions, and files
- Suggests possible fixes
- Generates a complete bug report (***GitHub-ready***)

My Workflow

Step 1

Replicate the issue

- Reproduce the issue in your own environment
- Confirm it's a real bug and not a conflict caused by a plugin, theme, or custom code.

My Workflow

Step 2

Investigate with AI (Cursor)

- Use **Ask Mode** to analyze the issue
- Discuss possible causes
- If the bug appeared after an update, compare the affected files and functions against their previous versions.

My Workflow

Step 3

Generate the bug report

- Ask AI to create it
- Copy → review → paste into GitHub


Real Example

<https://github.com/caseproof/membercore/issues/3472>

Authorize.net: PHP namespace warning on subscription update with newer libxml2 versions

- A bug that I can't replicate

1. It explains the issue

SimpleXMLElement namespace war... 

 `client.php` What can cause this errors since it only happens on one customer website. [31-Mar-2026 13:06:14 UTC] PHP Warning: SimpleXMLElement::__construct(): namespace warning : xmlns: URI AnetApi/xml/v1/schema/AnetApiSchema.xsd is not absolute in /home/customer/www/tbmowners.org/public_html/wp-content/plugins/membership-api/authnetapi/client.php on line 403

Worked for 1m 52s

This is a great question. The root cause is clear from the code, and the reason it only manifests on one customer's site comes down to their server's **PHP/libxml2 version**.

The Problem

The warning is triggered on line 400/403 of `update_subscription()`:


```
public function update_subscription($args)
{
    $xml_str = '<ARBUUpdateSubscriptionRequest xmlns="AnetApi/xml/v1/schema/AnetApiSchema.xsd"></ARBUUpdateSubscriptionRequest>';

    try {
        $simple_xml = new SimpleXMLElement($xml_str);
    } catch (Exception $e) {
        throw new MeprException(esc_html__('Failed to create XML element for subscription update', 'membership-api'));
    }
}
```

The namespace URI `AnetApi/xml/v1/schema/AnetApiSchema.xsd` is a **relative URI**. According to the XML namespace specification, namespace URIs **must be absolute** (i.e., start with a scheme like `http://` or `https://`). This is the namespace Authorize.net uses — it's technically non-conformant but it's what their API expects, so you can't change it.

Why Only One Customer?

The underlying XML parser is **libxml2** (a C library that PHP's SimpleXML wraps). **Newer versions of libxml2** (specifically 2.12+, shipped with PHP 8.2+ on recent distros) became stricter and started emitting warnings for non-absolute namespace URIs, where older versions silently ignored them.

So the customer on `tbmowners.org` likely has a newer PHP or **libxml2** version than other customers. You can confirm by checking their `phpinfo()` output for the libxml2 version. 

  Ask questions without making changes...

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2. It analyzes & compares

Why Only `update_subscription()` ?

| Method | XML Construction | Parses with SimpleXMLElement? | Has <code>LIBXML_NOWARNING</code> ? |
|--|--------------------------------------|-------------------------------|-------------------------------------|
| <code>refund_transaction()</code> | String concatenation | No | N/A |
| <code>void_transaction()</code> | String concatenation | No | N/A |
| <code>charge_customer()</code> | String concatenation | No | N/A |
| <code>cancel_subscription()</code> | String concatenation | No | N/A |
| <code>create_subscription_from_customer()</code> | String concatenation | No | N/A |
| <code>update_subscription()</code> (line 403) | <code>new SimpleXMLElement()</code> | Yes | No |
| <code>parse_authnet_response()</code> (line 715) | <code>simplexml_load_string()</code> | Yes | Yes |

`update_subscription()` is the only method that constructs XML via `new SimpleXMLElement()`, and it's missing the `LIBXML_NOWARNING` flag that `parse_authnet_response()` already uses.

Impact

Low. These are warnings, not errors. The XML is still parsed, the API call still works, and no data is lost. However, the warnings clutter the error log and could cause issues if the site converts warnings to exceptions.

Fix

+ Ask × Ask questions without making changes...

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3. It suggests the fix

The Fix

The simplest fix is to pass the `LIBXML_NOWARNING` option to the `SimpleXMLElement` constructor, just like `parse_authnet_response()` already does:

```
$simple_xml = new SimpleXMLElement($xml_str, LIBXML_NOWARNING);
```

This suppresses the namespace warning while still allowing the XML to be constructed correctly. The Authorize.net API will still accept the request — the namespace value itself is correct for their API, it's just not a spec-conformant URI.

Important note: These are PHP **warnings**, not fatal errors. The `SimpleXMLElement` is still created and the subscription update still works. The warnings are just noisy log entries. However, if the customer has a custom error handler that converts warnings to exceptions, or has `display_errors` on, it could cause visible issues for end users.

If you'd like me to apply this fix, switch to Agent mode and I can make the change.



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4. It creates the bug report

create a bug report for this.

Title

Authorize.net gateway: PHP warning “xmlns URI ... is not absolute” when updating ARB subscription (`client.php` line 403)

Summary

On some hosts (newer PHP/libxml2), `MeprArtificialAuthorizeNetProfileHttpClient::update_subscription()` triggers PHP warnings when building XML with `new SimpleXMLElement()` because the default namespace `AnetApi/xml/v1/schema/AnetApiSchema.xsd` is treated as a non-absolute namespace URI.

Severity

Low — warnings only; API flow may still complete. Risk increases if the site promotes warnings to exceptions or logs are monitored as errors.


Affected component

`memberpress/app/gateways/authorize.net/client.php` — `update_subscription()` (approx. lines 398–403).

Environment (example from report)

- Site: `tbmowners.org`
- PHP: likely 8.2+ with `libxml2 2.12+` (stricter namespace checks)
- Plugin: MemberPress Authorize.net client
- Date observed: 31-Mar-2026 13:06:14 UTC

Steps to reproduce

1. Use Authorize.net gateway with recurring / ARB flows that call subscription update.
2. Trigger code path that calls `update_subscription()` (e.g.  membership change that updates the Authorize.net subscription).



Ask



Ask questions without making changes...

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Tips

- Always try to replicate first
- Give AI clear inputs
- Use AI to analyze, not just write
- Always review before submitting

Thanks for your time!