MB NetStar Bho Version 4 Does Not Conform to the Software Design Requirements Set Forth in the Microsoft Windows XP Application Specification

Ever since NetStar version 4 was released, we have had some problems using certain parts of it. Over the past several years, numerous support cases have been opened with NetStar support, and even though we have been able to deploy “work-around's” within our infrastructure to allow us to “get around” or “bypass” the problem, the problem is still present.

Ultimately, we have determined the specific problems we have been experiencing to be associated with the design of the NetStar Browser Helper Object.

The purpose of this document is to provide you with specific details on the problems experienced with the NetStar Browser Helper Object, so that when the time comes for you to update or upgrade the design, functionality, and operational environment of the NetStar 4 environment, you are able to include design changes that will remedy the problems described in this document.

The specific design problems with the NetStar Browser Helper Object appear to be that it does not take certain design requirements into account as specified in the Microsoft Windows XP Application Specification version 2.3.

The Windows XP design requirements that the NetStar Browser Helper Object appears to have issues in the following areas:

- NetStar Bho Version 4 does not support the use of "limited" or "non-administrative" accounts, and thusly violates section 3.4 of the Microsoft Windows XP Application Specification.
- NetStar Bho Version 4 does not deal gracefully with access-denied scenarios, and thusly violates section 3.3 of the Microsoft Windows XP Application Specification.
- NetStar Bho Version 4 does not run properly when used with Internet Explorer 7 in a Windows Active Directory Environment and thusly violates sections 3.1, 3.2, 3.3, 3.4 of the Microsoft Windows XP Application Specification.

I am also aware that there are additional software components that NetStar makes use of, such as the Sun Java Runtime Environment.

However, it is important to state that the Sun Java Runtime Environment functions without incident in our domain as an independent software entity.

It is also important to state that once the NetStar Java Application is launched and running inside the Sun Java Runtime Environment, there are no problems with this Java Based NetStar application.

The problem is when the NetStar Bho 4 components attempt to interact with the Sun Java Runtime Environment to launch the NetStar Java application, the application design issues present in the NetStar Bho 4 component prevent the NetStar Java Application from properly launching.

While the NetStar Browser Helper Object operates flawlessly when running on a standalone workstation while the user is logged on as an administrator, it is important to state that running NetStar on a standalone workstation with users logged in as administrators poses countless risks to network security, customer data, identity information, and dealership accounting information.

In addition to the plethora of network security issues that may arise by allowing users to log into workstations with administrator level access, our dealership privacy and network security policies, prevent users from accessing windows workstations with administrative credentials.

The problems described in this document exist across Mercedes Benz dealerships nationwide. However, if other Mercedes Benz dealerships have a network environment that consists of a bunch of standalone workstations connected into a switch, without any infrastructure that provides central administrative control or security, or if other dealerships allow users to log in as administrators, they would never be in a situation that would allow this problem to be discovered.

Due to the constant increase in the number of security risks that can impact computer networks, ignoring the problems described in this document by compromising network security is not an option for the “Confidential Organization” because we do not want to put our customer information, or our internal accounting information at risk.

It is also important to be aware that current federal laws require all network security breaches to be reported to the authorities , when that breach results in the theft of customer data. Doing so will also result in the business or institution where the breech occurred being “blacklisted” on a web site http://www.privacyrights.org/ar/ChronDataBreaches.htm that was created by the United States Congress as part of the same series of laws that require the reporting.

Several automotive dealerships are already on this list, next to brokerage firms, credit card companies, fortune 500 companies, and universities. I know it may have been difficult to understand the nature of our NetStar problems in the past, because the support tickets we have opened always contained specific technical issues, and the exact nature of the problem in its entirety has never been fully articulated until now.

Out of the seven dealerships that we have connected to our Enterprise Windows Domain Environment, we have only had problems with the following applications. ***(Most have already been fixed by the manufacturer according to the information we provided)***.

- Mitsubishi Parts Catalog – Fixed by Mitsubishi re-designing their parts catalog product to meet the requirements set forth in the Windows XP Application Specification.

- "Confidential Organization" Software –DMS Extract Utility – Fixed by "Confidential Organization" Software re-designing their DMS Extract application to meet the requirements set forth in the Windows XP Application Specification

- NADA Valuation Application - Fixed by NADA after providing NADA with specific technical information proving certain design flaws prevented their software from behaving properly when used by non-administrators in a domain environment.

- Chrysler - Star Parts - Unresolved

- Chrysler - Lead Management Customer Central - Unresolved

- Mercedes Benz - NetStar - Unresolved

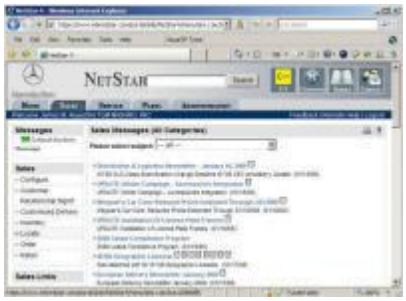
All other applications from Ford, Lincoln-Mercury, Mazda, Mitsubishi, Reynolds & Reynolds, and a number of other application vendors, that are locally installed, or are web based with locally installed active-x controls, meet all requirements of the Windows XP Application Specification version 2.3 and operate without incident in a Windows Enterprise Domain Environment when users are logged in with non-administrative credentials.

I am hoping that this information will be helpful to the individuals who are involved with the NetStar environment, so that when the time comes for Mercedes Benz to update or upgrade the design, functionality, and operational environment of the NetStar 4 environment, the designed issues listed here will be completely addressed. It may even be possible to update the NetStar Browser Helper Object independently of a larger NetStar update, and resolve the issues listed here quickly without much effort or resources.

The next several pages contain a detailed description of the problem we are experiencing with the NetStar Browser Helper Object. This has and continues to be a problem since NetStar 4 was implemented.

The man NetStar 4 web page contains numerous links off to the left side of the screen that, in order to launch properly, require the installation of the NetStar browser helper object.

However, that NetStar browser helper object does not properly function in a Windows Enterprise Domain Environment when users are logged in with non-administrative access.



Several examples of the how each link is programmed can be seen below.

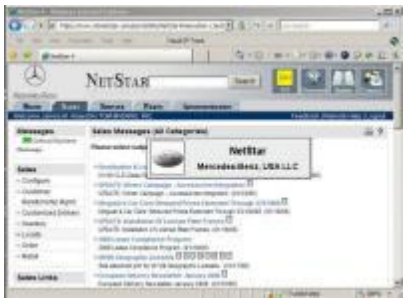
"Locate" Link à
https://www.mbnetstar.com/portal/site/NetStar4/menuitem.c1ec0ca12589df866630de310ca13453/NetStarDo%7CVISTA%7CLocate%7Ccom.mbusa.mbapps.trans.vistaNet.locate.LocateTransaction

"Inventory" Link à
https://www.mbnetstar.com/portal/site/NetStar4/menuitem.c1ec0ca12589df866630de310ca13453/NetStarDo%7CVISTA%7CInventory%7Ccom.mbusa.mbapps.trans.vistNet.inventory.InventoryTransaction

When a user is logged into the domain with non-administrative credentials, and clicks one of the links in the example above (for example, the "Locate" link below) the dynamically generated .JNLP file that is supposed to download and automatically cause the NetStar Java Application to load up and run inside the Sun Java Runtime Environment does not. Instead, the internet explorer page shown above simply refreshes.

The same problem happens even when the user is logged into the domain as a domain administrator, so the NetStar Bho Software must require something that's present and operational on a local standalone workstation that ceases to exist when that workstation is connected to a Windows Enterprise Domain Environment.

However, if I do this while logged in as an administrator on a standalone or “rogue” workstation that I placed outside of the domain for testing, the .JNLP file automatically downloads and begins to launch as shown below.



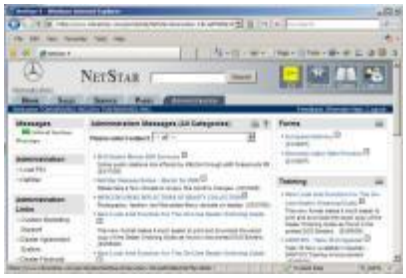
I then click "yes" to accept the security certificate as shown above and shortly after doing this, the application opens up as shown below.

One interesting thing is that one link has always worked when the user is logged into the domain with a non-administrative account.

When the user clicks on the “Administrative” tab and clicks on the “NetStar” link on the left side of the screen as shown below, the NetStar Java Application always launches.

The link that allows this to happen appears to be coded differently than the other links from the NetStar home page and is shown below.

https://www.mbnetstar.com/portal/site/NetStar4/menuitem.31b1a6f4d9e3297fac4469740ca13453/?vgnextoid=51442812dc48e010VgnVCM1000000048184335RCRD#



What is the difference between the link that always works when users are logged in to the domain as non-administrators shown below

https://www.mbnetstar.com/portal/site/NetStar4/menuitem.31b1a6f4d9e3297fac4469740ca13453/?vgnextoid=51442812dc48e010VgnVCM1000000048184335RCRD#

And the 15-20 BHO dependent links that do not work. (examples shown below)

"Locate" Link à
https://www.mbnetstar.com/portal/site/NetStar4/menuitem.c1ec0ca12589df866630de310ca13453/NetStarDo%7CVISTA%7CLocate%7Ccom.mbusa.mbapps.trans.vistaNet.locate.LocateTransaction

"Inventory" Link à
https://www.mbnetstar.com/portal/site/NetStar4/menuitem.c1ec0ca12589df866630de310ca13453/NetStarDo%7CVISTA%7CInventory%7Ccom.mbusa.mbapps.trans.vistNet.inventory.InventoryTransaction

I believe the 15-20 links that do not work require the use of the NetStar Browser Helper Object, and if what I understand is correct, the NetStar Browser Helper Object is the source and cause of the problems.

It may be possible for NetStar to provide me with Group Policy Settings that I must enter to enable this application to work without incident.

Or, depending on the design of the application, it may even be possible to update the NetStar Browser Helper Object independently of a larger NetStar update, and resolve the issues listed here quickly without much effort or resources.