The Unicenter NetMaster and SOLVE Product Code Base

– A briefing for our longer-term customers

Introduction

This document is intended for our long-term Unicenter NetMaster and SOLVE customers and will discuss our current development direction with respect to issues concerning these products' common code base. Computer Associates recognizes that customers have adapted and built their deployment policies and maintenance strategies around the issues discussed below, knowingly or unknowingly circumventing problems related to current product architecture.

This document will identify these problems and the changes needed to resolve them for the benefit of all our customers.

The Issues:

Until recently, most SOLVE and Unicenter NetMaster applications were delivered and installed separate to a common code base called Management Services (MS). When a new product or version was released, changes were made to Management Services to implement new functionality. There was no control in place to limit a product version to a particular version of MS. This led to four areas of concern for both vendor and customer:

1. **Floating Releases**
    Whenever a new version of Management Services was released, all existing products and versions could run on another code base in addition to the version for which it was originally written. The effect of having all product releases "float" across MS releases became very confusing. In most cases, new releases of products were not backwardly compatible, and if ran on an MS release earlier than the one they were designed for, would produce unpredictable results. Customers and CA Support had to have knowledge of minimum release levels of Management Services as a prerequisite to the products they were running. Inevitably, customers floated existing products forward when a new release of a product required a new level of Management Services.

    For example, customers that had SOLVE:Access version 3.3 may have had the product deployed on 2 or 3 different install bases of Management Services. This scenario meant instability and inconsistency of maintenance and support.

2. **Complicated Support**
Many aspects of product support became complicated when there was no simple definition of the code base for a product release. The definition of "supported product release" became a combination of a product release level and a Management Services release level. When a particular release of Management Services was 'de-supported', customers were required to upgrade its requisite products with a new release level of Management Services, sometimes with no real change in functionality, to get to a supported release level of code.

Fixes for a product would also include fixes to Management Services. SMP/E also required that fixes, which had no relation to the product they were using, had to be applied to satisfy MS related PREREQ chains. This caused confusion between the customer and our support team, leading to unnecessary errors.

3. **Attention to Quality Assurance**
To be rigorous with our Quality Assurance practices, every supported product release had to be tested with every supported release of Management Services, in multiple different product combinations, to ensure there were no regression or software conflicts. The effort required to achieve this level of quality was exacerbated by the increase in new products sharing supported releases of Management Services.

4. **Mixed address space deployment**
Due to the shared code base, it was implied that products could technically run in the same address space. In some cases, it was not recommended to mix products in the same address space, and in general terms, product mixing was not certified during testing of new releases. Under certain conditions, combinations could technically work. However, unknown results and impacts caused by one product's features over another existed. Consequently, there was no way to offer good advice and quality assurance for all possible combinations, only the intended ones.

A shared code base is a technical advantage that enables Computer Associates to efficiently re-use stable and proven code to create new products. The advantage for our customers is not only a stable code base but also products that share a common look and feel. However, uncontrolled combinations of products in single address spaces at customer sites are a support problem for CA and customer alike.

Goals of our solution

1. *Get back to the basics* – Deliver and support all SOLVE and Unicenter NetMaster products with technology and internal component structures that are transparent to customers.
2. *Control of the product code base* -For a given product in the field at a given release level, the code base will be self-defined. Customers with the same product release will have the same code base. Fixes for a given product release will be known and predictable entities.

3. ***Minimize upgrades*** – Maximize customer return on investment with minimal release and de-support activity for our products. Release upgrades will occur for new functions or at reasonable checkpoint intervals for important maintenance including operating system support.
4. ***Thorough testing*** - As each product is made available, it will have been thoroughly tested on its defined code base.
5. ***Control of product combination usage*** – Recommend only those products that are technically advised, beneficial and tested to do so by our Quality Assurance engineers.
6. ***Provide z/OS certification*** - Maintain quality standards and stability for our products at customer sites as new releases of z/OS are delivered. Maintenance will be in the form of a new level of Management Services or fixes to Management Services levels.

Our Progress So Far!

1. Back to the Basics…..

Since Management Services release 4.1, there is minimal visible external reference to a Management Services code base. Known only to development and support engineers, MS will still function according to release levels to assist in the management of source code and development processes.

Management Services as an externalized and named entity will disappear altogether, alleviating the problems associated with externalization. The common commands and services it provides will be described within product features.

Customer Value: Simplifying and controlling the definition of a product's code base will reduce confusion over what a customer has deployed and is using. All maintenance activity will be easier for customers because of this.

2. Control of the product code base….

Intelligent awareness of products and their code base is achieving increased stability and control. Products are aware of compatible releases of Management Services. Conversely, a given release of Management Services is aware of the products that have been tested with it. There is no longer any confusion by the customer regarding untested code mixes, invalid product/base mixes or untested product combinations.
eSupport (and later CustomerConnect) will provide customer access to our STAR problem tracking system that publishes fixes for products. This system will know of the MS code base release that is associated with a given product's release and deliver all relevant fixes to our customers.

Due to the shared nature of the Management Services code base, customers may be required to apply fixes that are irrelevant to their installed products as SMP/E associates fixes that are shared amongst several products. Discussions on how to minimize this redundant fix activity are still on going.

Customer Value: Simplifying and controlling the definition of a product code base will deliver the certainty and stability of standardization.

3. Minimize Upgrades….

New versions of our Network Management products are already being released that don't impact our mature products, which are either functionally stable or subject to minimal change.

For example, many Unicenter SOLVE:Access Session Management customers have large implementations, with hundreds or even thousands of users. These customers need not have to upgrade a stable and reliable release of Unicenter SOLVE:Access for no new features due to a new release of our mainframe network management products.

Customer Value: Simplifying and controlling the definition of product code base will minimize upgrade activity to meaningful release level improvements, reduce cost of ownership and increase ROI for customers.

4. Thoroughly Test…

Our Quality Assurance team will test just those products, and in all combinations, planned at a given release point. If, at a later date another product is released on the same MS level, then it will also be tested at that point. This frees us from occupying large numbers of testing resources required to get a new release out for one product (because all have to be released simultaneously).

Customer Value: Simplifying and controlling the definition of product code base means that we can thoroughly test all products in a controlled manner, delivering guaranteed stability to our customers.

5. Control of product combination usage….

The Install and Implementation Assistance (IIA) utility packaged with Management Services assists with the installation and configuration of regions running a single product, or a mix of products. Since MS version 4.1, IIA has been enhanced to limit the configuration of regions according to product combinations that have been tested by our Quality Assurance team. While it is not impossible for customers to configure regions outside of IIA, it is made clear that they are implementing an unsupported environment. There is no guarantee that such configurations can be upgraded in the future. Only tested product combinations will be released simultaneously on a common level of Management Services. Product combinations are discussed below.

Customer Value: By communicating clearly to our customers the best practice associated with the technology we have developed, they will extract greater value from their product purchases.

6. Provide z/OS Certification….

CA's mandate is to announce first day support for all products when IBM announces general availability of a new release of z/OS. To achieve this, CA participates in IBM's Early Test Program. We use our ETP involvement to test each supported product release

and ensure that the code base it uses is compatible with each release of z/OS. There is no longer a requirement to migrate to a MS level that supports a certain z/OS.

CA's online support system allows customers to access details of products that they are licensed for. Customers can view "UPGRAD" records directly, or via an online support matrix specifically containing z/OS compatibility information. These product records confirm the release level at which a z/OS level is supported and also contain any specific maintenance that is required to enable that support.

Customer Value: By simplifying the definition of a product, there is no ambiguity and minimal change for a customer with regard to support of a given z/OS level.

Product Groupings

For planning and scheduling purposes, we have divided the products that include Management Services in their base into groups according to anticipated testing and release clusters. Some of these clusters will be released more frequently than others. Final scheduling depends upon many factors including need for product change and the impact of external changes like z/OS evolution.

To CA internally, these product groups represent MS based products that will be developed, tested and released together.

For our customers, these clusters are defined here only to help with process planning and, in particular, re-configure any products running in shared address spaces where this capability may not be guaranteed going forwards. The groupings are a guarantee that the associated products will run in the same region and that they have been tested in those combinations. We will communicate any restructuring of these product groups to the customer when appropriate.

z/OS Network Management Product Group
      Unicenter NetSpy Network Performance
      Unicenter NetMaster Network Operations for TCP/IP
      Unicenter NetMaster Network Management for TCP/IP
      Unicenter NetMaster Network Management for SNA
      Unicenter NetMaster Network Automation
      Unicenter NetMaster File Transfer Management
      Unicenter SOLVE:FTS

z/OS System Automation Product Group
      Unicenter SOLVE:Operations System Automation
      Unicenter SOLVE:Operations System Automation for CICS

z/OS Session Management Product Group
      Unicenter SOLVE:Access Session Management

z/OS SOLVE:Central Product Group
 Unicenter SOLVE:Central Problem Management
 Unicenter SOLVE:Central Asset Management
 Unicenter SOLVE:Central Configuration Management
 Unicenter SOLVE:Central Change Management

z/OS Application Product Group
 SOLVE:Netmail
 SOLVE:InfoMaster

In addition to these z/OS groupings, there are Japanese and VM equivalent groups. We expect to deliver these soon after the release of the equivalent z/OS group.

Unintended side effects of the changes

Due to the shared code base, a primary strength of our MS based products is the level of integration it affords, both at functional and presentation levels. Now that we are restricting the product combinations that can run together in regions some customers have expressed concern that some of the value of that integration is being lost. This is not our intention. Rather it is to understand customer requirements, past and future and design solutions that are integrated purposefully and in the best way. The shared code base and the Inter-NetMaster Connection (INMC) facilities allow different MS based products in different regions to interoperate in many ways akin to the integration that is possible when running in the same region.

Because different types of MS based product will be on different length release cycles, a customer that has products from multiple groups will end up with multiple levels of MS installed and known to SMP/E. As we improve our installation process, it will be possible to have multiple levels of Management Services in the same Consolidated Software Inventory (CSI) database, if that is the preferred method of installation. In terms of our installation process, this will be of no concern because each release will use unique FMIDS, so SMP/E will not care. By simplifying fix presentation and retrieval to the product level, customers can be assured of getting the right MS fixes for the products that they have. The only downside is that extra DASD is consumed by the existence of multiple release levels of the MS code base. This side effect is insignificant compared to the benefits outlined. Given the normal upgrade process, all customers are used to having some degree of duplication of Management Services code anyway.

CA Support Policy

The normal CA support goal is to support the latest release of a product, and when that goes GA, to support the last release (GA-1) for another 12 months while customers migrate. To some extent, the nature of our support for the GA-1 release will change as the 12 months progress, and we will be working actively with customers to ensure that they know of and can migrate accordingly. This gives between 1-2 years of serviceability out of a product release where the product is evolving, with major new function emerging annually; longer where the product is more mature and releases are less frequent.

Since Management Services is de-emphasized as described in this document, the support policy for Unicenter NetMaster and SOLVE products is now simplified. Customers need no longer be concerned with Management Services releases, and only with the products for which they are licensed.

Where frequency of new product releases mean that customers will be upgrading unreasonably quickly, we will deviate from the standard policy to allow the same minimum of 1-2 years use out of a release. For example, Unicenter NetMaster Network Management for TCP/IP version 6.2 was released just 8 months after version 6.1. The reason for the release was to facilitate integration with NetSpy. We did not de-support and force an upgrade from version 6.1 for customers who had no reason to upgrade.

Summary and Conclusion

Change is often for the better. When communicated well, the impact of change is minimized. For our long-term customers, the impact of change to Management Services will hopefully be less through clear communication for which this paper is intended.

At CA, a core value for all employees is to put *customers first in every interaction*. Delivering quality software products and on going maintenance is a clear example of this core value. It is our firm belief that these changes to our product architecture and delivery methodology will improve the quality and value of the products and support services we provide to you, the customer.