



PARTNERCOMMUNITY®

BONDED for SUCCESS™

Loosely-Coupled eBonding for Trouble Management

An overview of loosely-coupled eBonding
for trouble management and a simple way
to accomplish it using integration forms

February 2010

PartnerCommunity, Inc.

John Yin
(561) 376-2456
jyin@partnercommunity.com

Loosely-Coupled Trouble Management eBonding

We have been helping telecommunication service providers to electronically bond (e-bond) with their large enterprise customers since 2002. In the past eight years, we have done many dozens of integrations for the largest companies in the world and learned some valuable lessons. The purpose of this white paper is to share one of these lessons.

In this white paper, we will focus on trouble management eBonding. Trouble management eBonding integrates a service provider's trouble management system with its enterprise customer's helpdesk. It not only allows the service provider to proactively notify its customers about service issues, but also enables a customer to report incidents to the service provider - all electronically. For example, if a customer's end user cannot access a server, the user would contact the customer's helpdesk to open an incident ticket. After some investigation, the customer's helpdesk agent determines that the issue is related to its network service provider, and assigns the ticket to the service provider, all done inside the customer's helpdesk application. Automatically, the ticket is forwarded to the service provider's trouble management system via eBonding, without phone calls, emails or logging into the service provider's web portal!

Trouble management eBonding has some unique characteristics that make it even more important to take a loosely-coupled approach. One common misconception about eBonding trouble management systems is that tickets in the two integrated systems are mirror images of each other, or the tickets in one system are the master tickets and those in the other are mere slaves. But usually this is neither practical nor desirable. The problem with such an approach is that whoever makes a change to a ticket is then the master of that change; the other side will be the slave for the change and have to replicate the change in its system for that ticket. This makes it impossible for either side to have autonomous control of their own business processes respectively. For example, the service provider may decide that a ticket is not its problem and want to resolve and close it. But the customer would need to keep the ticket open, either to dispute with the service provider about the decision or to look for other causes for the problem. If the customer's ticket simply mirrors the service provider's ticket, then the resolution/closure of the service provider's ticket will automatically lead to the resolution/closure of the customer ticket as well, leaving the customer with nothing to track the problem with. On the other hand, if the service provider has to leave the ticket open, the open ticket will create distractions to the service provider's operations as well as cause potential, false violations of SLA.

Another misconception about trouble management eBonding is that all parties to the integration can and should follow the same strict procedure all the time, as if they are internal departments of a single company. For example, if one side assigns a ticket of its own to the other side, then it locks up the ticket and only the other side can make any update to the ticket. This is also not practical. Many things can go wrong in a distributed, autonomous multi-company environment. It is more important to have a flexible environment where people can take necessary actions to get issues resolved quickly, than to have an over-restrictive environment in which a user mistake can cause a ticket to get stuck in some state that only a system administrator can extricate it.

We recommend that one consider the two tickets in the two e-bonded systems as a pair of related tickets. Each side maintains an autonomous control over its own tickets. The eBonding integration solution simply allows the two sides to exchange

Trouble ticket eBonding is not ticket-mirroring. Trouble ticket eBonding should also not force all the integration partners to follow the same process. Each integration partner should be allowed to have autonomous processes that can be changed independently.



PARTNERCOMMUNITY®

BONDED for SUCCESS™

Loosely-Coupled Trouble Management eBonding

What each of the integration partners should do for the integration ought to be governed by encapsulation. The less each party has to learn from other integration partners in order to complete the integration the better.

the information about the pair of related tickets in near-real time. Each side also agrees to interpret the exchanged information according to some pre-agreed rules and to use the exchanged information to assist with the collaborative problem resolution. In other words, we recommend that the two systems are loosely coupled, as opposed to being tightly coupled.

Though there are many benefits in taking a loosely-coupled integration approach, the tightly-coupled approach is intuitively simple and, on the surface, seems to require less work. For example, an enterprise customer may tell the service provider to create, update and retrieve tickets directly from the customer's helpdesk following the customer's business rules. This seems to minimize the work that the customer has to do for the integration. But in reality, the customer would have to teach, and the service provider would have to learn, understand and follow such business rules at the time of initial integration and whenever these rules are changed. This is usually very time-consuming and error-prone, thus making the integration more costly and unreliable.

On the other hand, a loosely-coupled approach reduces integration/maintenance costs and increases reliability of an eBonding solution. The key to a loosely-coupled approach is to encapsulate as many of each party's business specifics as possible in the right places. When the specifics of the process are properly encapsulated, neither side has to learn them from the other in order to implement the integration, thus lowering the integration costs. When the processes on both sides are more autonomous, changing the processes on one side will not require changing the eBonding solution, thus reducing the maintenance costs and making the solution more reliable.

It is easy to make an integration loosely-coupled if the following three suggestions are followed:

1. Do not let the other party update your ticket (especially ticket priority and ticket status) directly.

For example, a priority 1 ticket opened proactively by a service provider may not require the same level of attention at the customer's helpdesk. If the customer lets its ticket be updated by the service provider directly, the customer's helpdesk may experience many unnecessary fire-drills which could interrupt the customer's normal operations. Also, a ticket that the service provider thinks is resolved does not mean there is nothing left on the customer side to do for the issue.

2. Do not force the other party to strictly follow your own ticket state machine (i.e. ticket status transition rules).

It is not always appropriate or possible for two autonomous companies to follow the same ticketing process. Both sides should treat the messages from the other party as information and use its own business process to decide on how to update its own ticket using the information. If a message is received in a wrong state, instead of simply rejecting it, it should be copied into the corresponding ticket on the receiving side as a worklog comment and let the helpdesk user decide what to do with the information.

3. Do not force the other party to figure out what you want it to do by examining your ticket. You know what you want the other party to do, so tell it as it is.



PARTNERCOMMUNITY®

BONDED for SUCCESS™

Loosely-Coupled Trouble Management eBonding

When the other party queries your tickets directly, the only thing they see is what is in the tickets at the moment. Usually the other party does not know, programmatically, what has been changed and why. To determine what needs to be done about the ticket, the other party has to understand and translate your business rules into their own code. For example, two sides might agree that if, for a customer ticket, *AssginedGroup = CarrierA*, *Status = Assigned*, *Category = Failure*, and *VendorTicketId = Null*, then they should treat this as a new ticket to be reported to the service provider, and use the most recent worklog comment as the detailed incident description. But if you change your categorization scheme two months later, the other party will have to change as well.

The better alternative is to encapsulate this in your own workflow. For example, your workflow will use the rules above to detect a new ticket to be reported to the service provider. You should mark it and tell the service provider that here is a new ticket for it. This way, the service provider can grab the new ticket without having to know how to determine there is a new ticket for itself. Similarly, it is not recommended that you just send your partner system the latest copy of your ticket and let it figure out what has changed and what you want it to do. Instead, you should tell exactly why you are sending this message about the ticket, e.g. you just added a comment, or you want to have the ticket escalated.

There are many ways to make an integration loosely-coupled. One effective way is to use integration forms (a.k.a. staging forms) that are set up in the customer's helpdesk application. The integration forms are used to exchange information between the customer and the service provider. For more information about this integration form approach, please refer to the white paper, *Using Asymmetry to Achieve eBonding Scalability*.

For more information on the loosely-coupled integration approach, please contact:

John Yin
(561) 376-2456
jyin@partnercommunity.com



PARTNERCOMMUNITY®

BONDED for SUCCESS™