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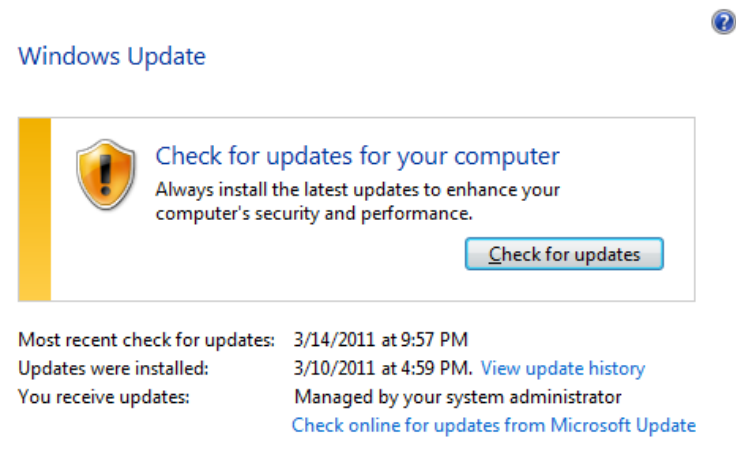
What's New with High Availability in the PI System

Presented by
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Customer Support Engineer
OSIsoft Asia Pte. Ltd

How to deal with the inevitable

- **Unplanned Downtime**
 - Power failures
 - Network failures
 - Software failures
 - Hardware failures
- **Planned Downtime**
 - Windows Updates (“Patch Tuesday”)
 - Software installation/upgrades
 - Hardware installation/upgrades
- **Disaster Recovery**

- **Risks!**
 - **No access to data**
 - **Loss of data**





High Availability makes it easy to

- **Mitigate risk**

- Eliminates single points of failure
- Protects against potential data loss

- **Achieve higher uptime**

- Handles unplanned or planned downtime
- 24x7 access to the PI System

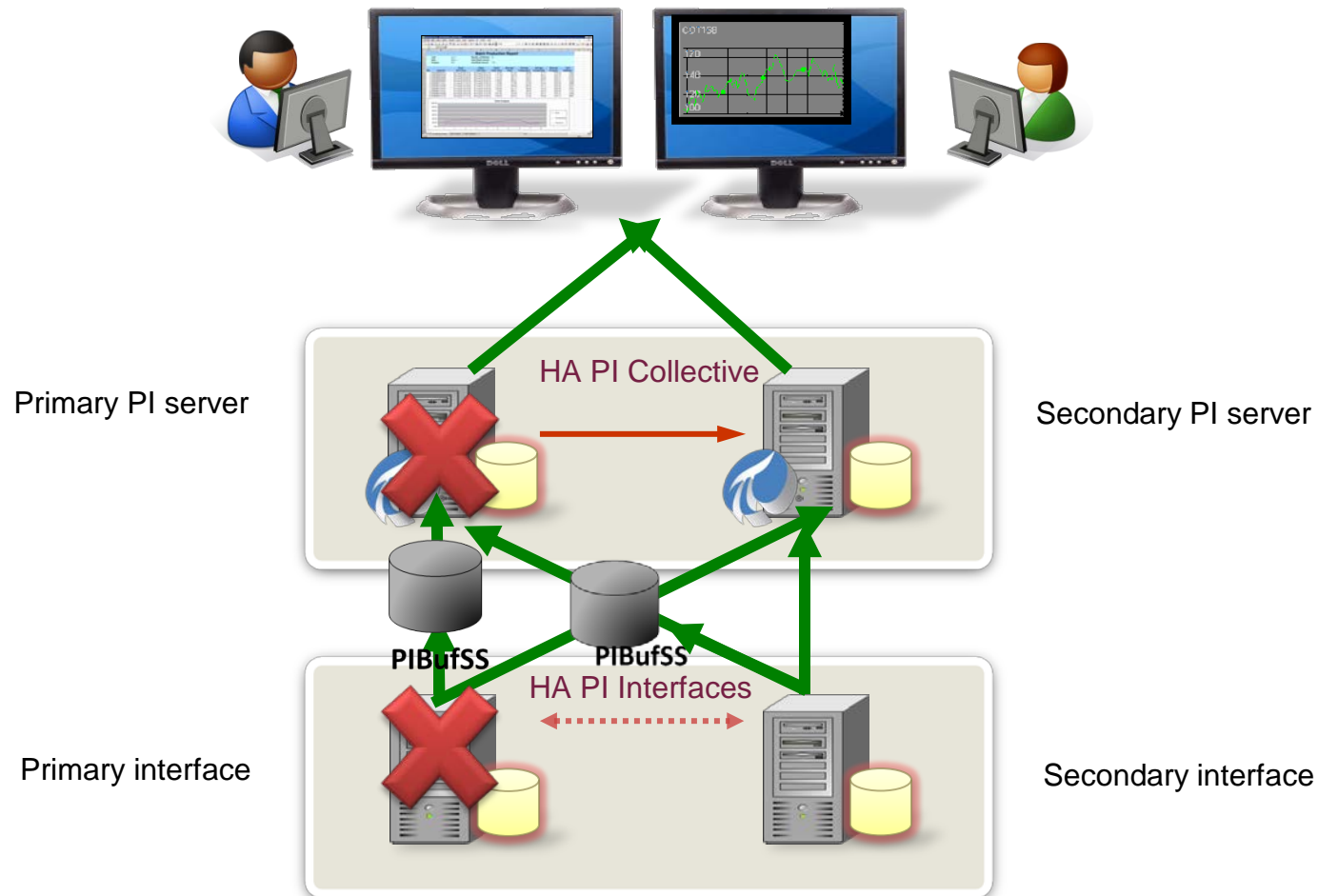
- **Provide higher quality of service**

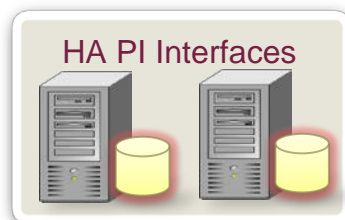
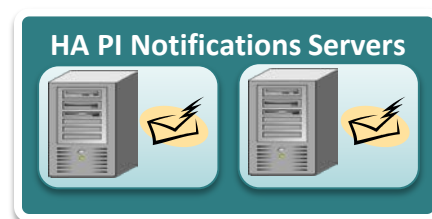
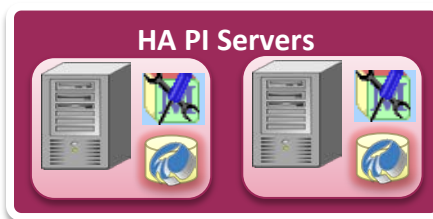
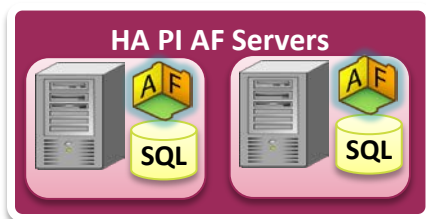
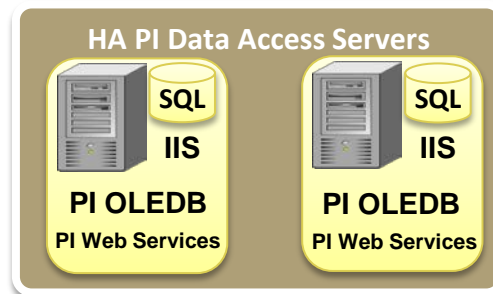
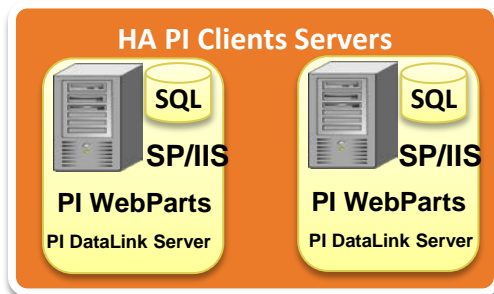
- Scales out with multiple nodes
- Load distribution
- Geographic distribution

- **Reduce TCO**

- Simple configuration and administration
- Automatic, hands free failover for PI Server

High Availability in action





PI System Products with High Availability

- **PI Interfaces** – most support failover
- **PI Server** – built into PI Data Archive, PI Asset Framework
- **PI Analytics** – supported in PI ACE, PI Performance Equations, PI Totalizers, PI Real-time Statistical Quality Control
- **PI Notifications** – since initial release
- **PI Data Access** – PI OLEDB with Microsoft SQL Server (Standard or Enterprise), PI Web Services with Microsoft IIS
- **PI Clients** – PI WebParts with Microsoft SharePoint



Features and Benefits of High Availability

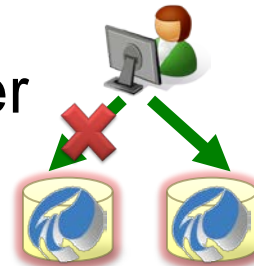
- **Replication** – easy to reproduce



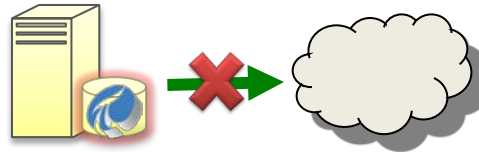
- **Redundancy** – no single point of failure



- **Failover** – seamlessly switch over

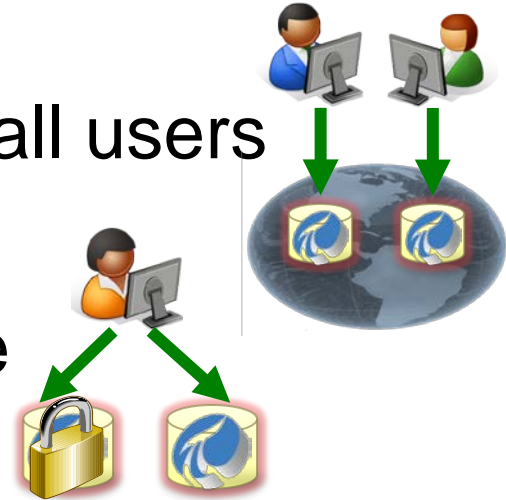


- **Buffering** – no data loss

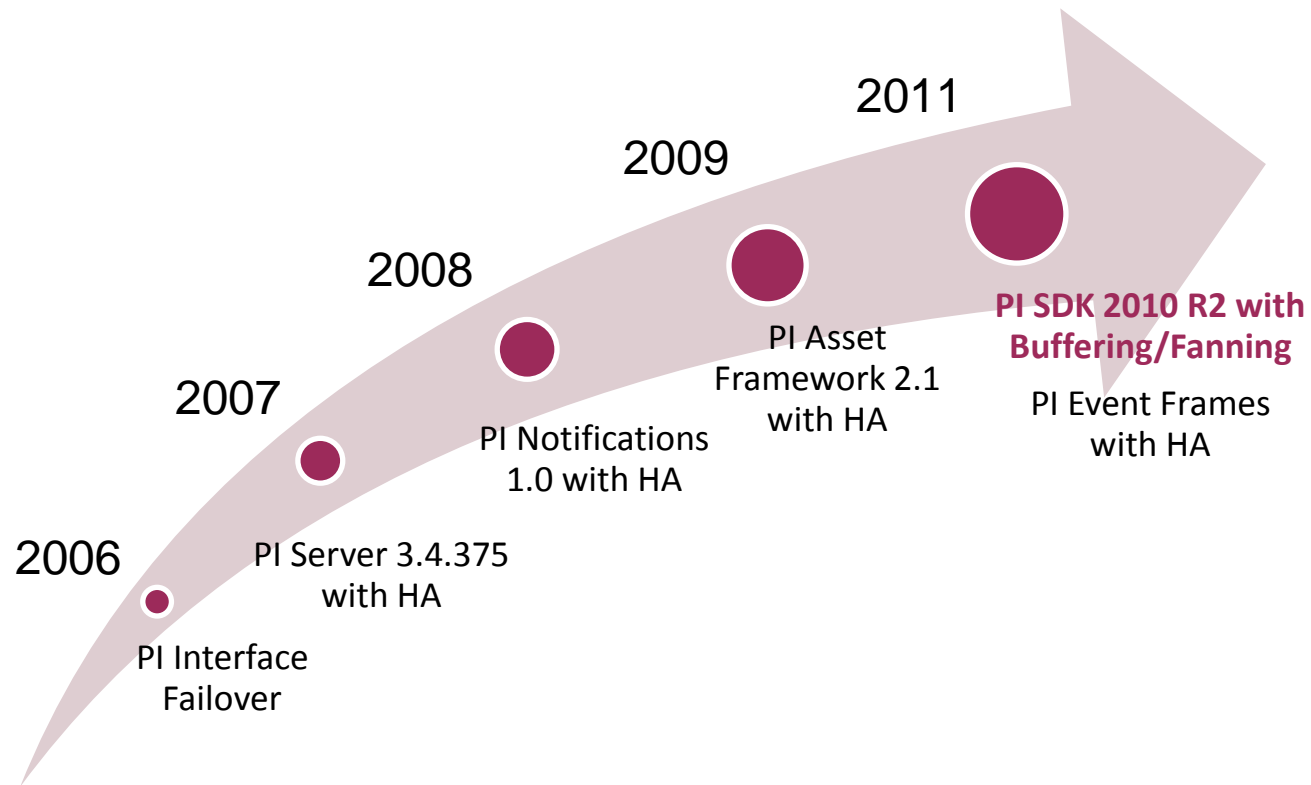


More Features and Benefits

- **Distribution** – fast performance for all users
- **Security** – ensures your data is safe
- **Disaster recovery** – continuity, no matter what



Timeline for High Availability



What's New with High Availability

- **PI SDK 2010 R2**

- **Fanning**: Write the same data to HA PI Collective
- **Buffering**: Queue data when disconnected from PI Server
- Similar to PI API Buffering/Fanning
- PI Clients, PI Data Access, and Custom PI SDK applications
- For example manual entry applications, custom interfaces
- Release in Q3



Before PI SDK 2010R2



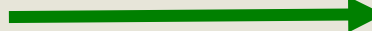
Primary PI server



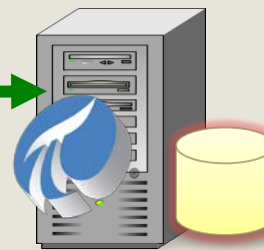
HA PI Collective



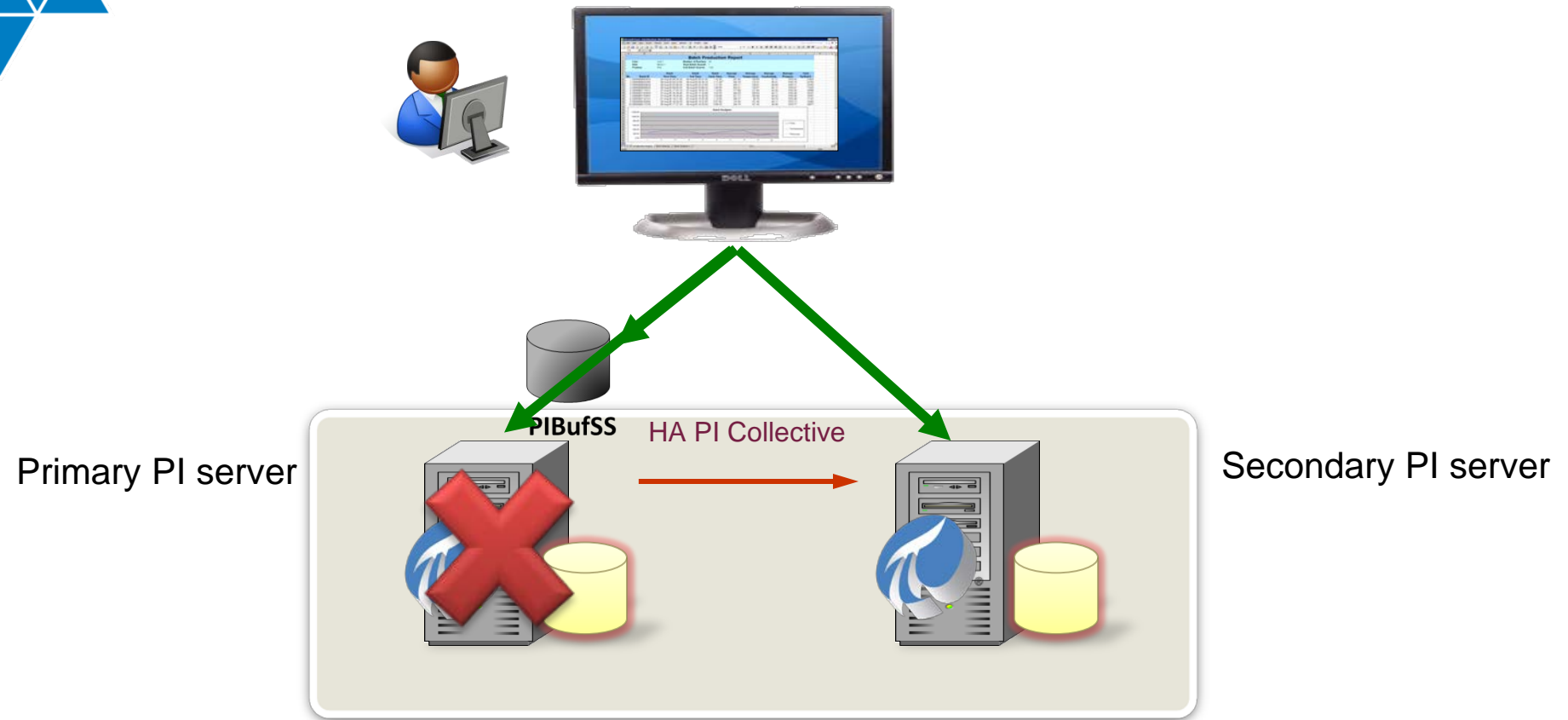
PItoPI Interface



Secondary PI server



After PI SDK 2010R2





Demos

- Fanning/Buffering in PI Clients and PI Data Access products using PI SDK 2010 R2



Compatible Technology

- **Virtualization Software**
- **High Availability PI System**



What should you do next?

- **Perform a risk analysis for potential failures**
- **Determine requirements for uptime and data integrity**
- Review available resources
- Plan your system architecture
- Upgrade your PI System to High Availability
- Contact Tech Support (or CoE) for help!



Key Takeaways

- High Availability is built into the full PI System infrastructure
- HA helps minimize risk of data loss and maximize data availability
- HA is insurance against unplanned or planned outages
- HA is an important part of a good disaster recovery plan
- **HA builds trust with users – PI System is there all the time**



Additional Resources

- **OSIsoft PI System Virtualization & High Availability (HA) - Complementary & Contrasting Technical Approaches to HA** presentation at UC 2010 by Corning, Inc. at osisoft.com (http://bit.ly/UC2010_HA)
- **High Availability and Virtualization: Even Better Together** webinar on OSIsoft vCampus (http://bit.ly/vCampus2009_HA)
- **OSIsoft High Availability Platform** whitepaper at osisoft.com (http://bit.ly/HA_WP)
- High Availability User Guides on Tech Support site
- PI System Manager II Training course



Thank you