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# An Introduction to ConsoleWorks

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## Agenda

- Systems Management
- What is Console Management?
- ConsoleWorks Fundamentals
- Framework Integration
- ConsoleWorks in Action
- Questions and Answers

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## Systems Management




- Key Issues
  - Minimise downtime
  - Minimise time-to-repair
  - Increase security
  - Ease of implementation and use
  - Training and retaining personnel
  - Distributed environments
  - Disparate devices

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## Conventional Solutions




- Current System Management
  - SNMP/MIB based
  - Network dependant
  - Polling of systems – not real-time
  - No system logging
  - Complicated to implement and use
  - Extensive training required
  - Not available for all devices

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## The ConsoleWorks Solution



- Provides console aggregation over IP
- Real-time monitoring and notification 24/7
- Web enabled
- Enables system management from 'anywhere' at 'any time'
- Proactive notification of critical events
- Security – user, machine, activity
- Communications security via SSL and SSH
- Complete logging and audit trail
- Customisable On-line help

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## The Difference...




- True real-time management
- Secure access
- Enhanced device level security
  - Logging of all device activity
  - Report generation of events, users, devices
- Knowledge base retention
- Easy to implement and use
- All events are reported and logged
- Provides support documentation for SLA

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## What is Console Management?




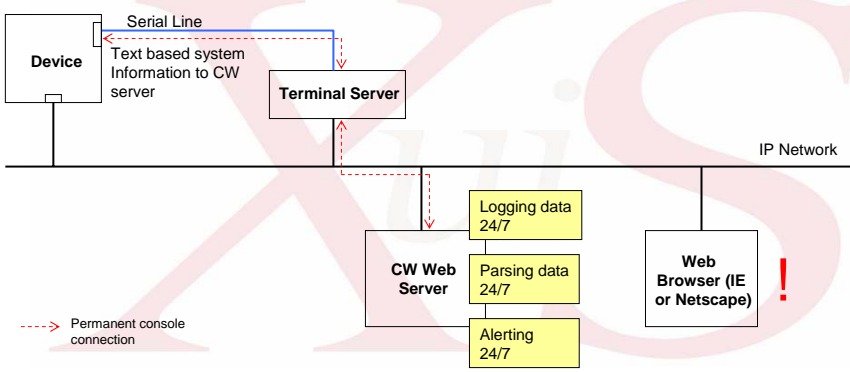
- Monitor and manage equipment remotely without the need for a running OS
  - Servers (web, file, application, etc)
  - High-end storage devices (RAID Controllers, etc)
  - Network switches (copper, fibre-link, etc)
  - Routers
  - Network appliances
  - Network security devices

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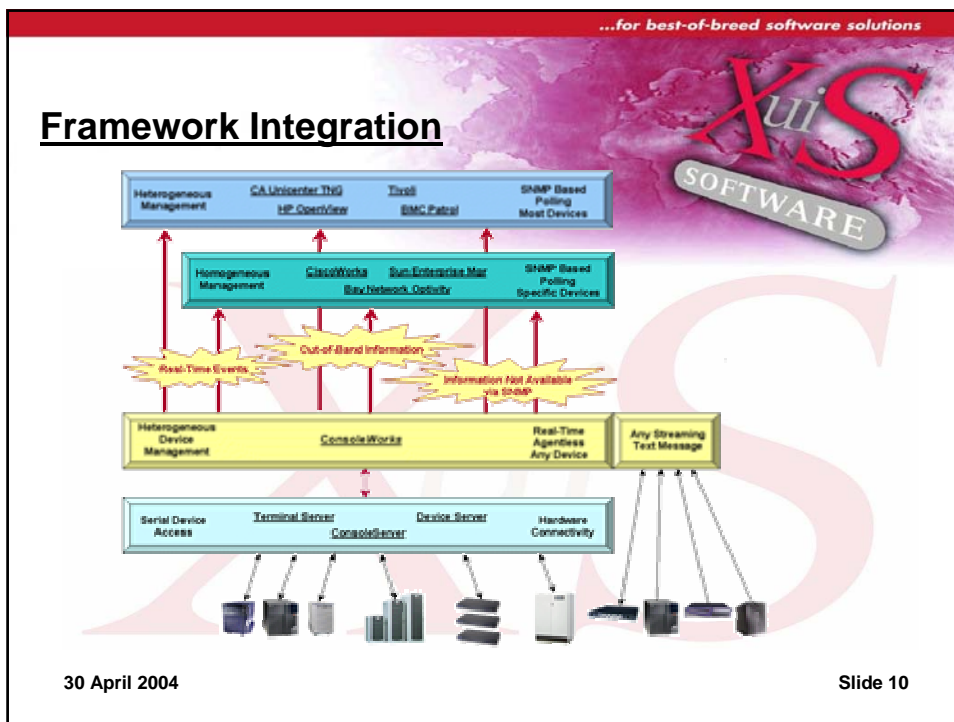
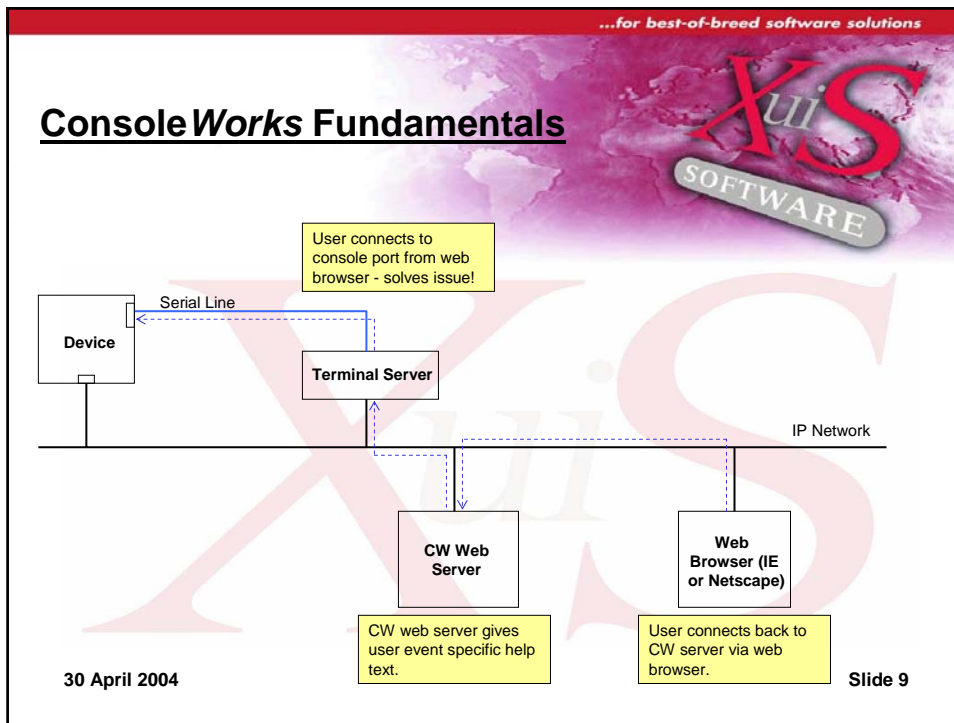
## ConsoleWorks Fundamentals





The diagram illustrates the architecture of ConsoleWorks. A **Device** is connected to a **Terminal Server** via a **Serial Line**. The Terminal Server sends **Text based system Information to CW server**. The CW Web Server is connected to the **IP Network** and handles **Logging data 24/7**, **Parsing data 24/7**, and **Alerting 24/7**. A **Web Browser (IE or Netscape)** is also connected to the IP Network, with a red exclamation mark indicating a critical component or warning. A legend indicates that dashed red arrows represent a **Permanent console connection**.

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## What does this give you?

**XUIS**  
SOFTWARE

*Reduced downtime and improved response -*

w/o ConsoleWorks

w/ConsoleWorks

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## Prime ConsoleWorks Candidates

**XUIS**  
SOFTWARE






- HP-UX
- Tru64 UNIX
- OpenVMS
- Solaris
- AIX
- Windows NT/2000
- Linux
- Cisco
- SAN switches
- Digital VAX
- HP Alpha
- HSZxx disk controllers
- HSGxx disk controllers
- Sun Servers
- HP Servers
- IBM RS/6000 Servers
- SGI Servers
- PBX Systems

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## ConsoleWorks Summary

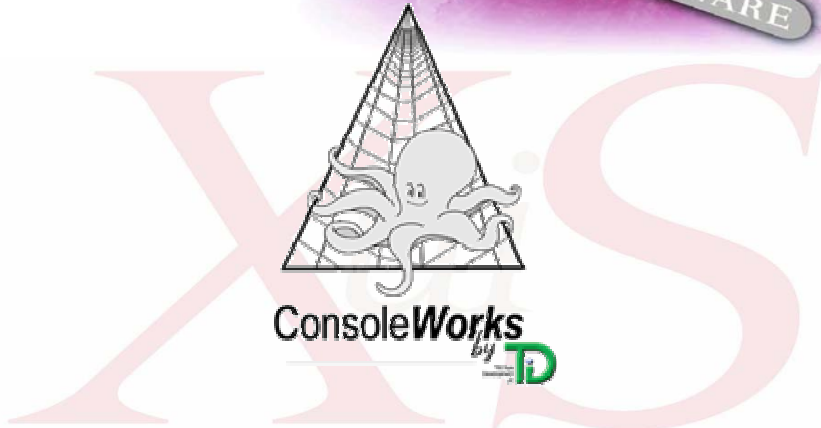
*Console Aggregation over IP enables:*

-  **Event/Alarm Notification -**  
ConsoleWorks is like having a dedicated operator sitting in front of each of your systems and devices 7x24 reporting on their health in real time!
-  **Direct Access -**  
Let ConsoleWorks transport you to your data center from anywhere at any time!
-  **Complete Logging/Auditing -**  
ConsoleWorks listens and records everything that your systems communicate, and everything that is sent to them! Additionally ConsoleWorks records critical audit information in each managed device's log file.
-  **Knowledge Base -**  
ConsoleWorks knows your systems and serves up this information to help return system to operation in short order! This is in the form of site-specific and manufacturer data to rapidly identify issues and corrective actions.
-  **Security -**  
ConsoleWorks' multiple levels of access authorization and data encryption locks down your environment! This takes the form of user, device, and event privilege as well as communications security

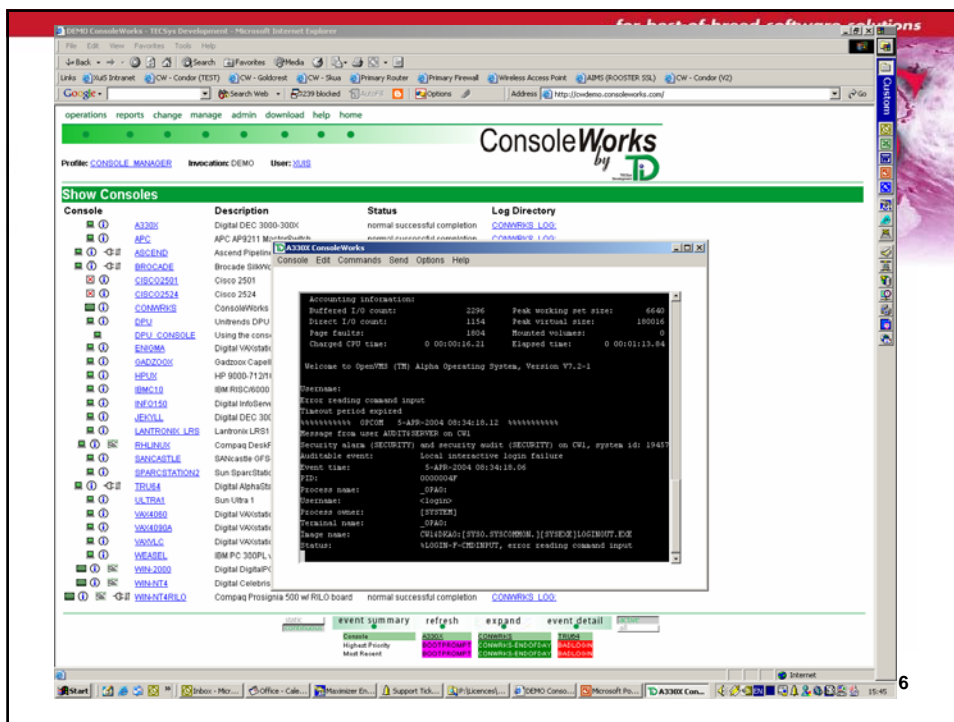
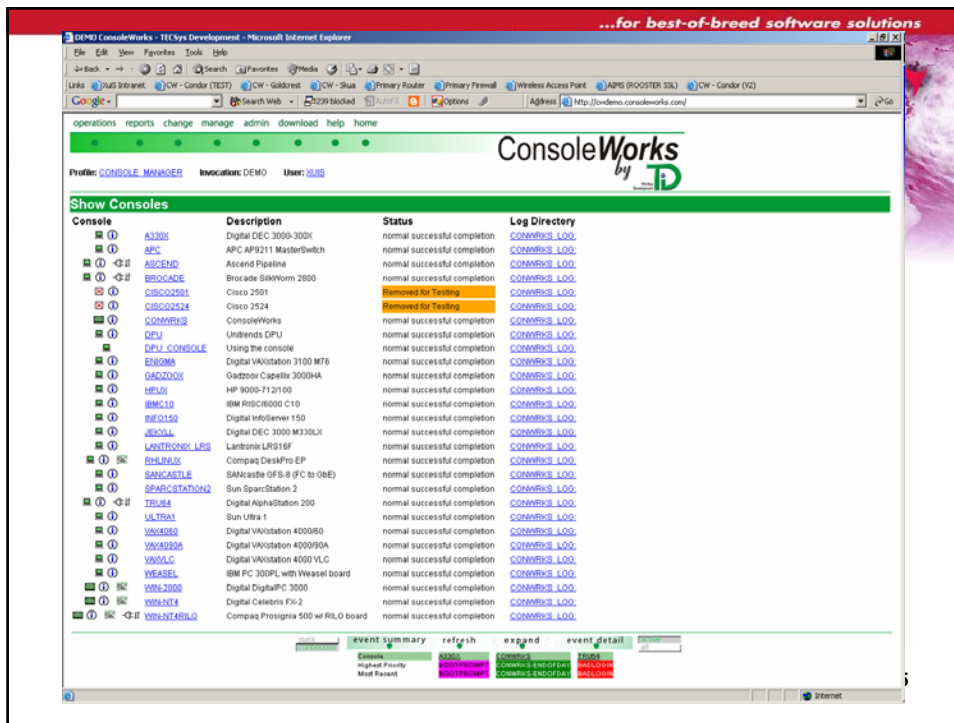
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## ConsoleWorks in Action



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```
Accounting information:
Buffered I/O count:      2296      Peak working set size:    6640
Direct I/O count:      1154      Peak virtual size:      180016
Page faults:           1804      Mounted volumes:        0
Charged CPU time:      0 00:00:16.21  Elapsed time:           0 00:01:13.84

Welcome to OpenVMS (TM) Alpha Operating System, Version V7.2-1

Username:
Error reading command input
Timeout period expired
***** OPCOM 5-APR-2004 08:34:18.12 *****
Message from user AUDIT$SERVER on CW1
Security alarm (SECURITY) and security audit (SECURITY) on CW1, system id: 19457
Auditable event:      Local interactive login failure
Event time:           5-APR-2004 08:34:18.06
PID:                  0000004F
Process name:         _OPAO:
Username:             <login>
Process owner:        [SYSTEM]
Terminal name:        _OPAO:
Image name:           CW1$DKAO:[SYS0.SYSCOMMON.][SYS$EXE]LOGINOUT.EXE
Status:               %LOGIN-F-CMDINPUT, error reading command input
```

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Profile: CONSOLE MANAGER Invocation: DEMO User: JUIS

Logfiles: A330X

```
A330X Apr 1 00:00:01 2004 *! Log File Begins -- ConsoleWorks Major Version 2, Minor Version 0, Patch Version 0, Update Version 0
A330X Apr 1 01:00:03 2004 *! Log File Timestamp
A330X Apr 1 02:00:03 2004 *! Log File Timestamp
A330X Apr 1 03:00:04 2004 *! Log File Timestamp
A330X Apr 1 04:00:04 2004 *! Log File Timestamp
A330X Apr 1 05:00:04 2004 *! Log File Timestamp
A330X Apr 1 06:00:04 2004 *! Log File Timestamp
A330X Apr 1 07:00:04 2004 *! Log File Timestamp
A330X Apr 1 08:00:04 2004 *! Log File Timestamp
A330X Apr 1 09:00:05 2004 *! Log File Timestamp
A330X Apr 1 10:00:05 2004 *! Log File Timestamp
A330X Apr 1 11:00:05 2004 *! Log File Timestamp
A330X Apr 1 12:00:05 2004 *! Log File Timestamp
A330X Apr 1 13:00:05 2004 *! Log File Timestamp
A330X Apr 1 13:53:39 2004 *! CTP monitoring console
A330X Apr 1 13:54:11 2004 *! CTP disconnecting from console
A330X Apr 1 13:54:14 2004 *! CTP connecting to console
A330X Apr 1 13:54:21 2004 <
A330X Apr 1 13:54:21 2004 <
A330X Apr 1 13:54:21 2004 <
A330X Apr 1 13:54:21 2004 <
A330X Apr 1 13:54:21 2004 <
A330X Apr 1 13:54:21 2004 <
A330X Apr 1 13:54:23 2004 *! Protected character h10 sent by CTP from 65.197.74.25
A330X Apr 1 13:54:23 2004 < Username:
A330X Apr 1 13:54:23 2004 < !01 EOT HLT
A330X Apr 1 13:54:23 2004 < PC= FFFFFFFF,62177AD4 PFL= 00000000,00001504
A330X Apr 1 13:54:23 2004 <
A330X Apr 1 13:54:23 2004 *! Detected event SYSTEM_HALT - OpenVMS Server system is halt
A330X Apr 1 13:54:27 2004 < >>>
A330X Apr 1 13:54:27 2004 <
A330X Apr 1 13:54:27 2004 *! Detected event BOOT$FORMPT - Console at boot prompt
A330X Apr 1 13:55:19 2004 < >>> boot
A330X Apr 1 13:55:19 2004 < INIT-S-CPU...
A330X Apr 1 13:55:19 2004 *! Detected event BOOT$FORMPT - Console at boot prompt
A330X Apr 1 13:55:20 2004 < INIT-S-ASCT...
A330X Apr 1 13:55:20 2004 < INIT-S-NXP...
A330X Apr 1 13:55:28 2004 < INIT-S-NVP...
A330X Apr 1 13:55:28 2004 < INIT-S-COC...
A330X Apr 1 13:55:28 2004 < INIT-S-8CC...
A330X Apr 1 13:55:28 2004 < INIT-S-WI...
```

event summary refresh expand event detail

Done Internet

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Profile: CONSOLE\_MANAGER Invocation: DEMO User: JMS

Configuration: TRU64

Alias: [ ] Display Alias:

Description: Digital AlphaStation 200

Logset: [Yes] [CONMARKS\_LOG]

AutoPurge Log Files: [30] Days (p=asak)

AutoPurge Events: [7] Days (p=asak)

Type: Telnet Change Console Type

IP Host: 192.168.1.32

IP Port: 2002

Raw Data: No

Status: normal successful completion

Require Exclusive Connect:

Information URL: <http://h18002.www1.hp.com/alphaserv/workstations/retred/e200series.html>  
 Open in new window

Manager: [ ] Open in new window

User URL #1: [ ] Open in new window

User URL #2: [ ] Open in new window

User URL #3: [ ] Open in new window

Event Cycle: [http://cwdemo.consoleworks.com/generat/Console=TRU64:Event=APC\\_POWER](http://cwdemo.consoleworks.com/generat/Console=TRU64:Event=APC_POWER)  
 Open in new window

Managed System Information

Name: Tru64  
 Location: TECsys Development Demo Center  
 Address: 1600 15th Street, Suite B  
 Plano, TX 75025  
 U.S.A.  
 Contact Person: TDI Support  
 Contact Phone: 972-881-1553  
 Serial Number: 954801VNR  
 Service Contract:  
 Service Phone:  
 Operating System: Tru64 Unix 5.1A  
 Patch: none  
 Day to call: TC 07969 #20396 based in UK 24 hr call

Profile Access: READ ACK WRITE CONTROL

ADMIN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALPHA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ASCII	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CONSOLE_MANAGER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DEB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEFAULT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NETWORKS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPERATOR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SYSTEMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
JMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ISS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

event summary refresh expand event detail

Done

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A330X ConsoleWorks

Console Edit Commands Send Options Help

```

Last interactive login on Wednesday, 28-JAN-2004 04:51:28.06
You are logging into A330X under the OPERATOR account
$
$ sho term
Terminal: _OPA0:      Device_Type: VT100      Owner: OPERATOR

Input:  9600      LFill: 0      Width: 80      Parity: None
Output: 9600      CRfill: 0      Page: 24

Terminal Characteristics:
Interactive      Echo            Type_ahead     No Escape
No Hostsync     Ttsync         Lowercase      Tab
Wrap            Scope          No Remote      No Eightbit
Broadcast       No Readsycn   No Form        Fulldup
No Modem        No Local_echo No Autobaud    No Hangup
No Brdstmbx     No DMA        No Altypeahd   Set_speed
No Comsync     Line Editing  Overstrike editing No Fallback
No Dialup      No Secure server No Disconnect  No Passthru
No Syspassword No SIXEL Graphics No Soft Characters No Printer Port
Numeric Keypad ANSI_CRT       No Regis      No Block_mode
Advanced_video No Edit_mode  DEC_CRT       No DEC_CRT2
No DEC_CRT3    No DEC_CRT4  No DEC_CRT5   No Ansi_Color
VMS Style Input
    
```

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The screenshot shows a web browser window displaying the ConsoleWorks interface. The page title is "ConsoleWorks by TD". The user is logged in as "SUB". The "Active Event Summary" section shows a table with columns for event categories and a total count. The table data is as follows:

Group	CRIT	FAK	MAJ	MIN	WARN	ERR	NOT	INFO	DEB	IND	CLEA	REQ	Total
SECURITY	0	0	1	0	0	1	0	0	0	0	0	0	2
DL_PLATFORM	0	2	1	0	0	1	0	0	0	0	0	0	4
Console	0	0	0	0	0	0	0	0	0	0	0	0	0
AS	0	0	0	0	0	0	0	0	0	0	0	0	0
DB	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW_CONSOLE	0	0	0	0	0	0	0	0	0	0	0	0	0
Tools	0	2	1	0	0	1	0	0	0	0	0	0	4

The slide features a large, stylized "XUIS" logo in the background. The text "Questions and Answers" is centered on the slide. In the top right corner, there is a logo for "XUIS SOFTWARE" with the tagline "...for best-of-breed software solutions".

**Questions and Answers**

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