

# IT Operations Playbook:

*8 Communication Improvements to Reduce MTTR (Mean Time to Repair)*

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In today's connected, digital world, a major IT issue translates directly into a business issue. When things go wrong with IT, your business is disrupted and in some cases, can grind to a stop. Everyday operations and processes – accepting orders or processing payments, producing goods or delivering services, providing high level quality of care to patients, etc. – may become impossible to perform. Whether your organization is experiencing a cyberattack, facing a datacenter power outage, or suffering through application or IT infrastructure downtime, there is no time for guess work and no room for improvisation. IT downtime costs businesses and organizations thousands of dollars and when they occur, every minute counts.

Numerous reports and studies have been conducted to discover the true cost of IT downtime and infrastructure failure as a result of a major IT incident. In 2015, a report released by Stephen Elliot and the IDC team took a close look at these cost implications for Fortune 1000 companies. What they found might surprise you:

- Average hourly cost of an infrastructure failure: \$100,000 per hour<sup>1</sup>
- Average cost of a critical application failure: \$500,000 to \$1 million per hour<sup>1</sup>
- Average total cost of unplanned application downtime per year: \$1.25 billion - \$2.5 billion<sup>1</sup>

Perhaps you're thinking, *these numbers are insignificant for a large Fortune 1000 company*. Well, consider a survey from CA Technologies that states that **“the average business suffers from about 14 hours of IT downtime per year.”**<sup>2</sup> That same survey reads that **“small enterprises lost, on average, more than \$55,000 in revenue due to IT failures each year, while midsize companies lost more than \$91,000.”**<sup>2</sup> When you factor in the hindrance to employee productivity and reputational damage caused (**half of the businesses surveyed by CA Technologies said IT outages damaged their reputation and 18% described the impact on their reputation as “very damaging”**<sup>2</sup>), it is clear to see that organizations should prioritize quick and efficient incident resolution.

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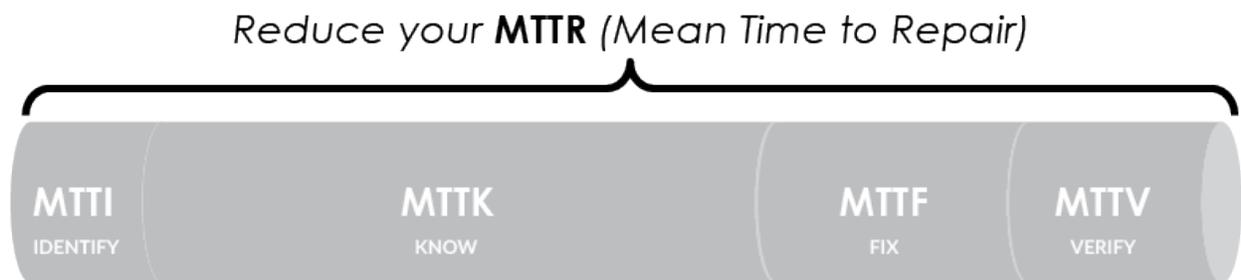
<sup>1</sup> <http://devops.com/2015/02/11/real-cost-downtime/>

<sup>2</sup> <http://www.tlcompany.com/news/2015/07/28/cost-it-downtime/>

As companies plan for and assess the impact of IT incidents, there are several key performance indicators (KPIs) to consider that help measure the duration of an event and therefore, the effects. One such KPI is the Mean Time to Repair or “MTTR” - the average time required to repair a failed component or device.<sup>3</sup> The lower the MTTR, the smaller the business impact an IT incident will have.

## Reducing the Overall Time to Incident Resolution - MTTR

While MTTR represents the overall resolution time, Forrester Research has broken it into 4 separate subsets of time - or phases - that all attribute to the average incident resolution time:



### **Mean Time to Repair, Restore or Resolve (MTTR) an IT incident**

1. **Mean Time to Identify (MTTI)** an incident occurred
2. **Mean Time to Know (MTTK)** and quickly connect the right people with the right information regarding an incident
3. **Mean Time to Fix (MTTF)** an incident
4. **Mean Time to Verify (MTTV)** the incident was resolved and in what way

The following section of the white paper will touch briefly upon each MTTR sub-component and then dive deeper into Mean Time to Know or MTTK, which accounts for the longest duration.

<sup>3</sup> <http://searchstorage.techtarget.com/definition/mean-time-to-repair-MTTR>

## **Mean Time to Identify, MTTI**

The Mean Time to Identify or MTTI is the state of MTTR in which information is acquired, a problem is acknowledged and there is an understanding of the incident's severity. To ensure an incident is identified as quickly as possible, organizations invest heavily on automating the identification process through constant and continuous service interruption monitoring.

## **Mean Time to Know, MTTK**

Once an incident has been identified, it's time to connect the right on-call personnel with the right information, so they can fully focus on resolution and can limit the negative impact on end-user satisfaction, on revenue generation and on the company brand image. The Mean Time to Know is all about assembling information regarding the event and communicating that information quickly to stakeholders. MTTK makes up about 70% of MTTR and holds the biggest opportunity for MTTR reduction. We will revisit MTTK and discuss reduction remedies later in the whitepaper.

## **Mean Time to Fix, MTTF**

The Mean Time to Fix includes coordinating the resolution of the event whether it be a process change, a reboot, or a change in code / hardware. Maintaining precise audit trails throughout the fix is also important during this segment. Improving MTTF requires quick coordination of expert teams, real-time collaboration and communication tools and a detailed and descriptive incident audit trail system.

## **Mean Time to Verify, MTTV**

After an incident is resolved, people tend to return to business as usual and oftentimes Mean Time to Verify is overlooked. A crucial step in reducing MTTR, MTTV offers the opportunity for an incident management team post mortem – an incident process review and a walk through of audits and communications sent. MTTV is the continuous improvement piece of MTTR.

## Automate and Streamline Communications to Reduce MTTK

Companies across all industries have focused their attention and efforts primarily on automating the processes supporting issue detection (MTTI), hotfix deployment (MTTF) and validation (MTTV). However, what they may not realize is that reducing MTTR is most productively accomplished by reducing what [Forrester Research calls, Mean Time to Know, or MTTK](#). MTTK is the mean time to know, understand, plan and coordinate an incident response. As previously mentioned, MTTK makes up 70% of MTTR – by far the largest bulk.

### How Can We Reduce MTTK?

The “time to know” includes reaching out to the right on-call people and providing them with the right information and the right collaboration tools so they can start investigating the issue. Therefore, MTTK can be reduced when the communication process is streamlined and automated. Organizations have the ability to find and eliminate untapped, unnecessary wasted time, and below are our eight recommended tips and techniques for streamlining and automating communications in order to achieve MTTK reduction:

1. Failing to prepare is preparing to fail – make sure you have a communication plan in place.
  - a. Identify all of the stakeholders (internal and external) that you will need to communicate with during and after any incident.
  - b. Name the internal “owner” of that communication relationship – e.g. help desk, incident manager.
  - c. Specify what tools will be used to communicate with each stakeholder.
  - d. Create incident message templates (to be modified at the time of the incident).
  
2. Know what teams are on-call and who is available. Going through spreadsheets, white boards, and call trees is inefficient and time-consuming in the wake of a major IT incident.
  - a. Ensure your on-call schedules are centralized and easily accessible on any device.
  - b. In your on-call scheduling system, assign certifications and skills to each on-call team member so you can easily filter and find the best resource during an IT incident.
  - c. Integrate your IT service alerting tool with your on-call schedules to automatically send notifications based on who’s available, and what skills/certifications they have.

3. During an IT incident, use a multimodal communication approach to ensure messages are received regardless of the time of the day, time zone or device.
  - a. Don't just rely on a pager system or phone calls – leverage a mobile app, push notifications, SMS, and other communication paths.
4. Use automation to collect recipient responses and eliminate manual calls.
  - a. Automate escalation of communications so when there is no reply or response in a certain timeframe, the next on-call team member is automatically alerted.
  - b. Allow recipients to easily confirm that they are able to take ownership of the incident by providing a one-click polling option in the alert – e.g. “Yes, I can work on the issue” vs “I am unavailable at the moment”.
5. Try using a single communication platform for all critical communications, both in and outside the IT department.
  - a. Having an organization-wide communication platform can ensure that contact information is up-to-date and that all team members are familiar with the communications and service.
6. If your team is global, plan for international communication hurdles.
  - a. Leverage mobile push notifications alongside traditional communication paths in the event that cellular service is down.
  - b. Ensure you have international SMS and voice coverage with local caller-IDs and SMS short codes.
7. Guarantee you can easily collaborate and discuss the incident with a conference bridge.
  - a. Rather than sharing conferencing dial-in numbers and passwords, use one-click conferencing tools to ensure you can launch and join a conference bridge quickly.
8. Because impacted users will start calling into a service desk once a major IT incident occurs, be proactive and keep stakeholders and impacted users informed to prevent additional influx of complaints.

## Why Companies Use IT Alerting by Everbridge

IT Alerting helps IT teams streamline and automate the way they communicate during major IT incidents, reducing MTTK and therefore MTTR. Everbridge's cloud-based solution ensures that IT teams can quickly notify and communicate with their key members during major service disruptions when every minute counts. IT Alerting provides automated intelligent notifications, automatic escalation of alerts, on-call scheduling, mobile alerting, self-service mobile app and integrates with ITSM platforms, including ServiceNow and BMC Remedy. The Solution connects the right on-call personnel with the right information, so they can hop on a conference bridge quickly and fully focus on restoring service and limiting the negative impact of incidents on end-user satisfaction and even revenue.

To learn more about reducing your MTTR with Everbridge IT Alerting for critical IT communication and escalation, visit our [website](#).

## About Everbridge

Everbridge provides a unified critical communication suite that helps clients be better prepared, make better decisions, and respond quickly and confidently during disruptive events. When an incident happens, whether it's a natural disaster or an IT service outage, we automate communications to ensure that the right messages get to the right people at the right time.

Widely recognized by analysts as the market leader, Everbridge solutions are trusted by clients in all major industries and government sectors to connect with over 50 million people around the world.

## THE ONLY END-TO-END PLATFORM

- **Planning:** Everbridge is easy to set up, maintain, and organize, meaning that you're always ready for a quick, coordinated response. Everbridge ensures that the right messages get to the right people - with the most advanced opt-in portal on the market, streamlined integration with internal and external data sources, and simple group and contact management.
- **Assessment:** When trouble strikes, you need rich insight, presented simply - so you can quickly assess potential impact and make an informed decision to avoid loss. Everbridge offers the only solution on the market that meets these demanding requirements, with the most advanced interactive dashboard in the industry.
- **Response:** In critical situations, ease-of-use can mean the difference between an effective response and a mistake that carries serious consequences. Everbridge is engineered to be simple to use under pressure, with a user interface that accelerates time-to-message and reduces the likelihood of errors.
- **Delivery:** Even during large-scale disruptions, Everbridge stays on. The most advanced platform in the industry ensures that you reach your contacts - every time. And with worldwide coverage and capabilities, including globally local calling infrastructure and data storage, we're ready to support you wherever your people are in the world.

Visit [www.italerting.com](http://www.italerting.com) to learn more.